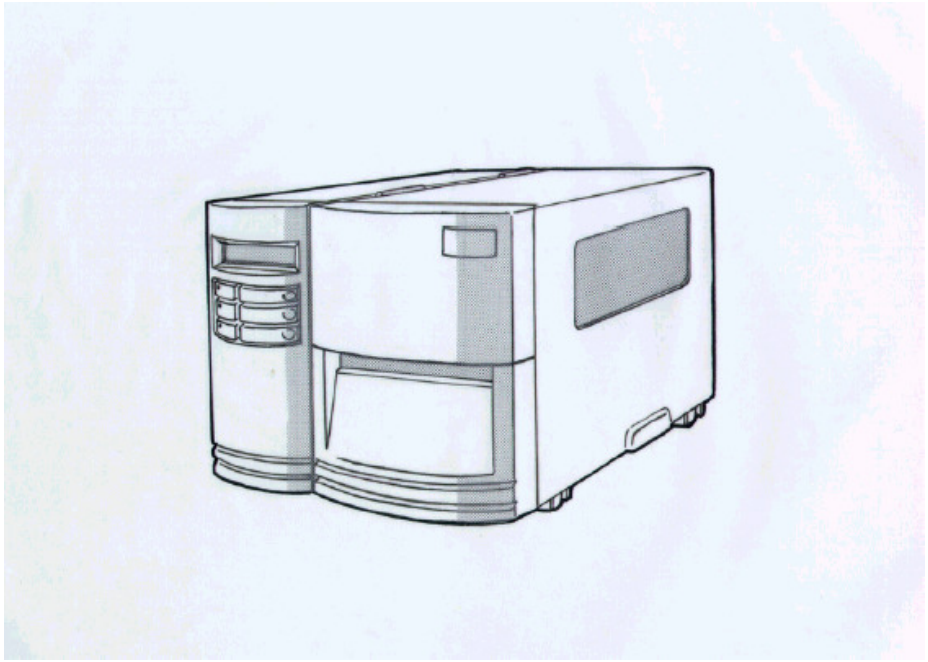
Xellent Series

Industrial Barcode Printer



X-1000v / X-2000v / X-3000v
User's Manual

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Getting Started

Congratulations on choosing the Argox Xellent Series (X-Series) industrial barcode printer. This user's manual, which describes the X-1000v, X-2000v, and X-3000v models, will help you get to know your new printer. The manual includes a guide to operate the printer as well as related information on troubleshooting, maintenance, and technical reference. Illustrations are provided to help you quickly become familiar with the printer.

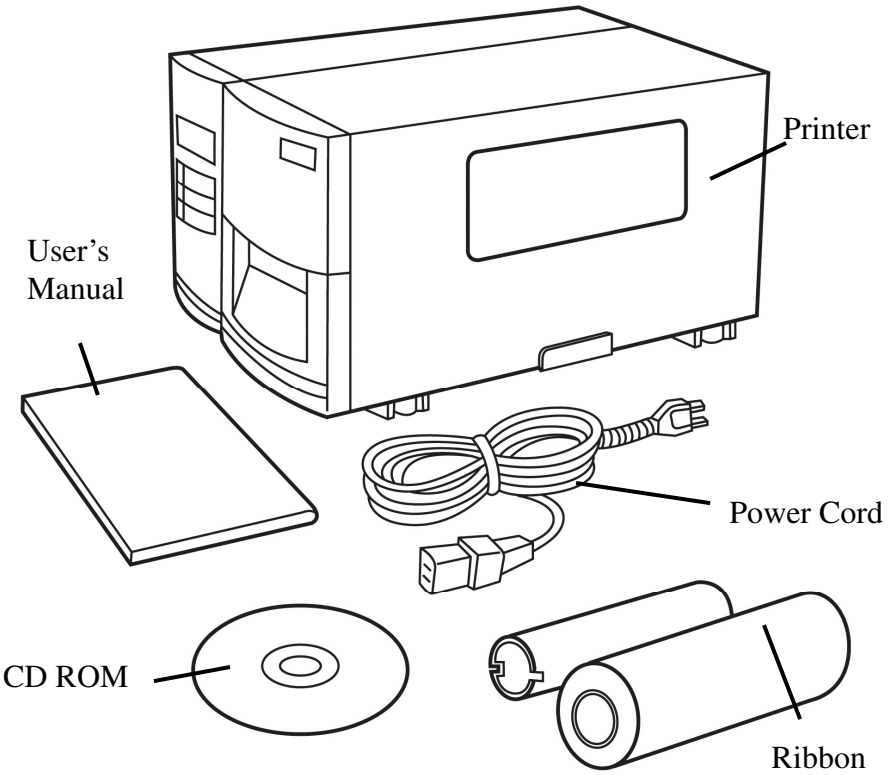
Unpacking

After receiving your printer, please check for possible shipping damage:

1. Inspect the outside of both the box and the printer for possible damage.
2. Open the top cover of the printer to see if the media compartments are in order.

Note: *If damage has occurred, contact your shipping company immediately to file a claim.*

3. Check whether you have received the following accessories together with the printer. If there are any items missing, please contact your local dealer.



Package Contents

- Printer
- User's Manual
- CD Rom Disk
- Power Cord
- Ribbon

Placing the Printer

Before setting up and connecting the printer you should consider the following.

WARNING! *Do not operate the printer in an area where it might get wet.*

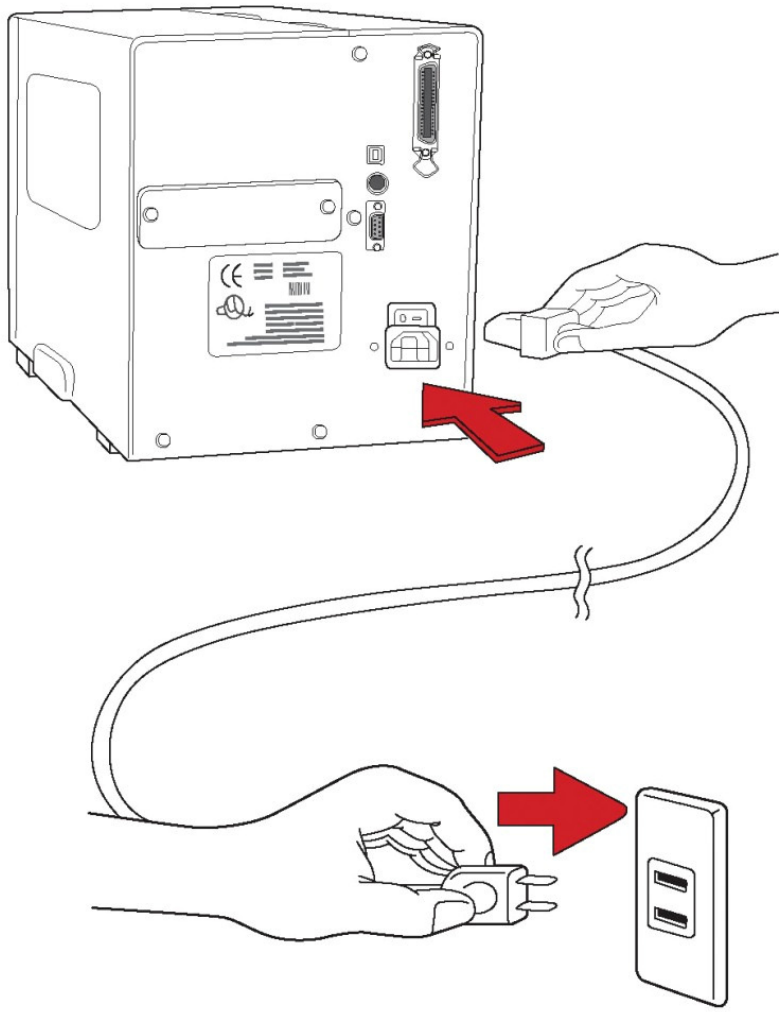
- Find a solid flat surface with adequate room for the printer and enough space above for media and ribbon access.
- Place the printer within cable distance of the host and printer (serial or parallel cable.)
- Isolate the power cord from other electrical cables.

Connecting the Power Cord

Connect the power cord as below.

WARNING! *For the X-1000v, make sure the power slide switch on the rear panel is switched to the correct local voltage, either 115V or 230V (default), otherwise damage to the printer may occur.*

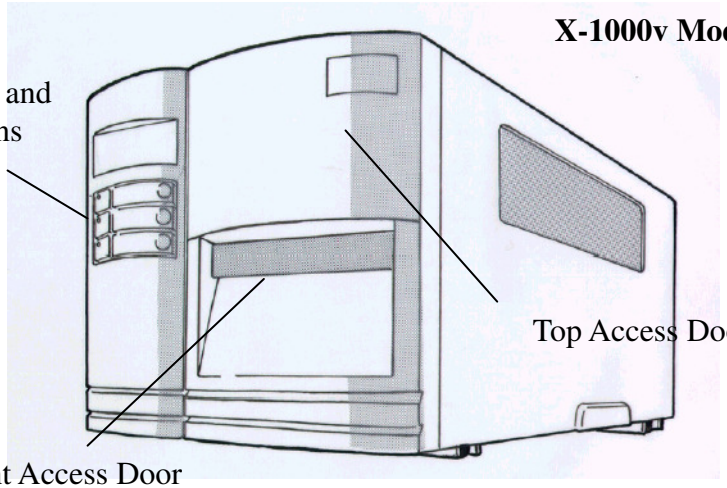
1. Make sure the power switch is in the "O" position.
2. Plug one end of the power cord into the power jack on the back of the printer, and the other end of the cord into an AC electrical outlet.

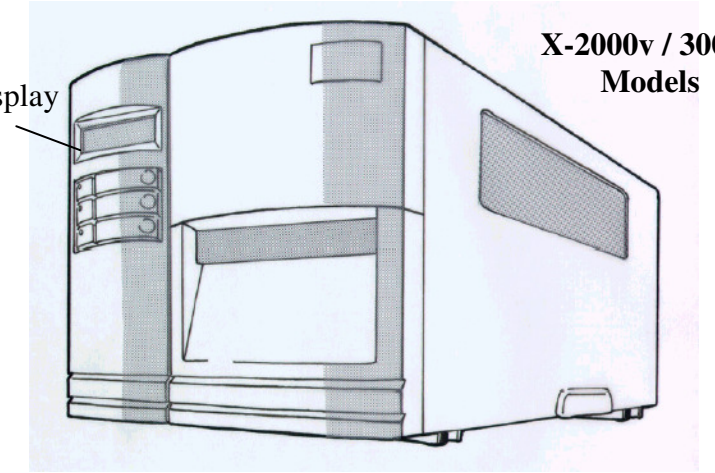


Getting to Know Your Printer

The illustrations below describe parts and features of the X-Series.

Front Panel





The front panel includes:

- 3 LED indicators (READY, MEDIA and RIBBON)
- 3 buttons (FEED, PAUSE and CANCEL)
- An LCD display (X-2000v and X-3000v models)
- Top Access Door
- Front Access Door

LED Indicators

There are three LED indicators on the front panel, READY, MEDIA and RIBBON. These indicators display the operation status of the printer.

READY	**On** – Normal operation **Off** –Printer error
MEDIA	**On** – Normal operation **Blinking** – Install new media Printhead overheat The printer is paused,
RIBBON	**On** – thermal transfer mode with ribbon installed **Off** – direct thermal mode (no ribbon installed) **Blinking** – Install a new ribbon *For the X-2000v/X-3000v models* The mode of thermal transfer and direct transfer set with the panel. *For the X-1000v model* Set with the Windows driver or command.

Buttons

There are three buttons, each with two basic functions.

Button	Function 1 (Press the button)	Function 2 (Press the button and power switch together)
FEED	Feed a label	Perform self test & print configuration report
PAUSE	• Pause printing • Press again to resume printing	Perform a media calibration
CANCEL	• Interrupt and delete a print task • Force printer to continue after an error is solved.	Reset FLASH settings

Notes:

1. *You should perform a media calibration after installation and when changing to a different type or size of media.*
2. *Before calibration, you must load the media and ribbon properly and move the label sensor to the correct position.*
3. *After calibration the printer saves parameters to FLASH. Without correct calibration gap detection is easily lost during printing especially for small labels (less than 1.5 inches in height).*
4. *After self-test, the printer is in dump mode. For normal operation, you must press CANCEL to restart the printer.*

LCD Display (X-2000v / X-3000v models)

The X-2000v and X-3000v models have an LCD that shows:

- printer status
- printer settings
- input data from a keyboard or barcode reader

After power-on, the LCD displays the following message:

READY (203,PPLB)

The first parameter is either 203 or 300, which stands for the printer resolution. The second parameter indicates the emulation (printer language), PPLA, PPLB or PPLZ.

If a keyboard is plugged in, the display shows:

READY (203,PPLB)
<ESC> FOR KEYBD

If a barcode reader is connected, the display shows:

READY (203,PPLB)
WITH B.C. READER

If an abnormal condition occurs, a related message is displayed. For example:

RIBBON OUT

Setting Display Language (X-2000v / X-3000v models)

The printer's LCD display supports six languages: English, French, German, Italian, Spanish, and Portuguese.

To select a language:

1. Press the PAUSE and CANCEL buttons at the same time.
2. Hold both buttons for about 3 seconds and release.
3. The language selection screen appears.

LANGUAGE
ENGLISH

4. Press the FEED button for the next language.
5. Press the CANCEL button to select and set the language.

Press PAUSE or the PAUSE+CANCEL buttons to exit the language selection screen and enter normal mode.

Item	Range	Factory Default
LANGUAGE	ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH, PORTUGUESE.	ENGLISH

Changing Settings from the Panel (X-2000v / X-3000v)

You can change settings using the buttons on the front panel of the X-2000v and X-3000v printer models, in addition to changing settings via software commands.

Buttons	Function
PAUSE+CANCEL (Don't press over 1 second)	Press to enter setting mode. Press again to exit setting mode and return to normal mode.
FEED	Press to show next parameter.
PAUSE	Press to show next setting item.
CANCEL	Selects and saves a parameter to permanent FLASH memory. Unless changed via panel or command the parameter is saved even if you restart the printer.

Setting Procedure

To change settings using the buttons on the front panel:

1. Turn on the printer. When READY appears on the LCD, press the PAUSE+CANCEL at the same time.
2. Press PAUSE until the item you wish to set appears.
3. Press FEED until the desired parameter appears.
4. Press CANCEL to save your setting. An asterisk appears in the last column.
5. Press PAUSE+CANCEL at the same time to return to normal mode.

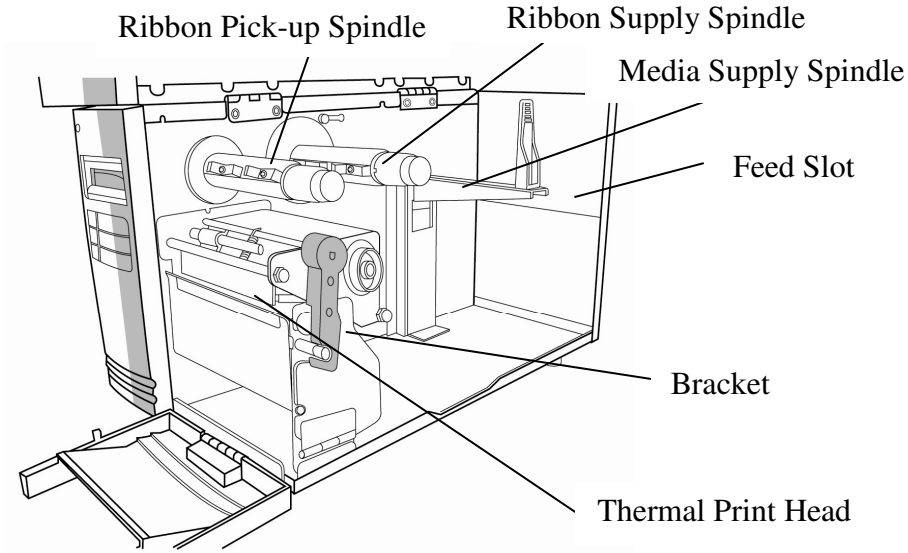
Note: *Do not change settings during printing or communication.*

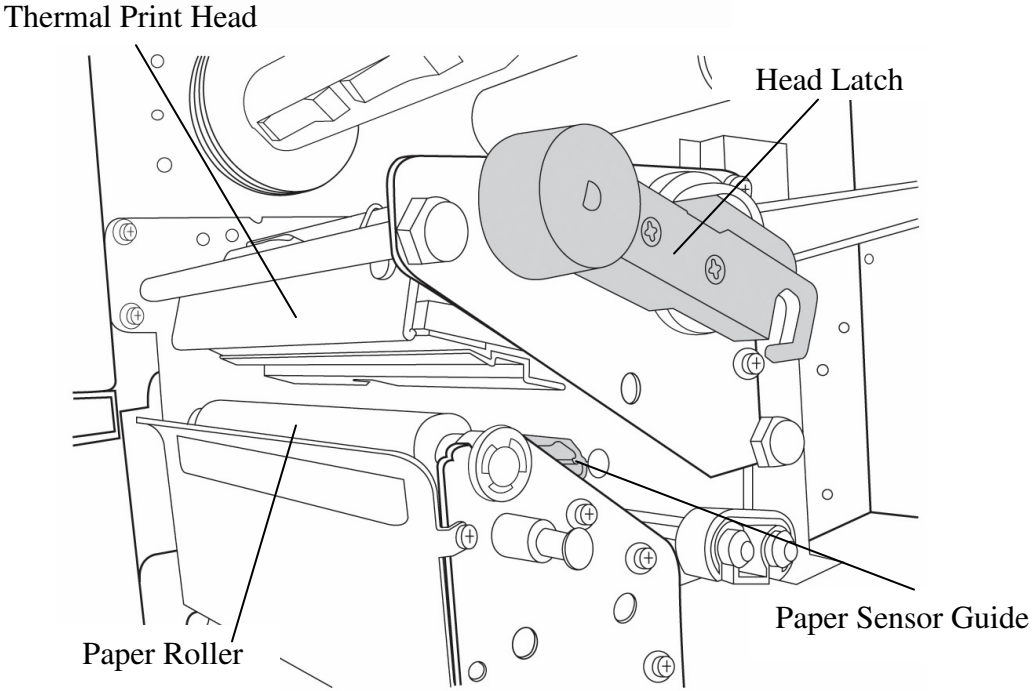
Item and Parameter Settings

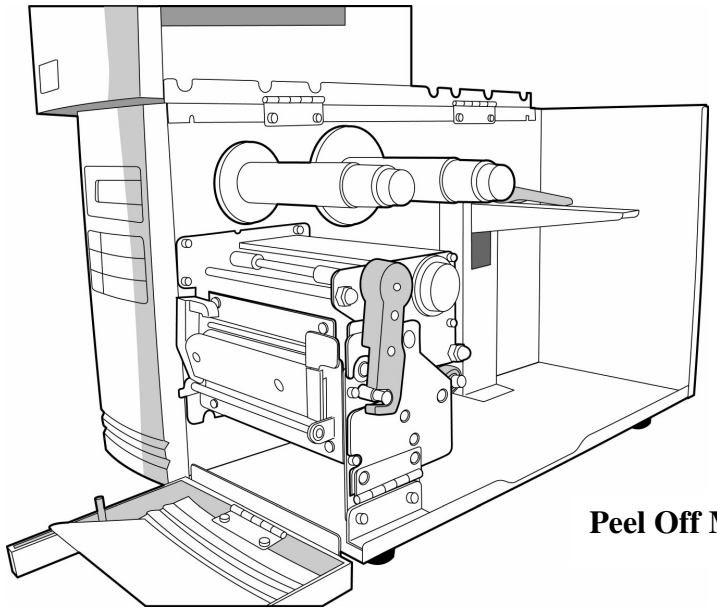
Item	Range	Factory Default	Remarks
PRINTER TYPE	Thermal transfer / Direct thermal	Thermal transfer	
CUT/PEEL POS (mm)	-15 ~ 50 mm	0 mm	Controls cut and peel position.
PRINT OFFSET (mm)	-8 ~ 15 mm	0 mm	Controls vertical print position. Positive value only.
TPH VER OFFS (mm)	-3~3 mm	0 mm	Offset of vertical print position.
RECOVERY PRINT	ENABLED, DISABLED	ENABLED	Contents reprint after media-out or ribbon-out
CUTTER INSTALLED	NO YES	NO	
CUT MODE	NORMAL W/O BACKFEED	NORMAL	
PEELER (DISPENSER) INSTALLED	NO YES	NO	
READER INSTALLED	NO YES	NO	
WIN CON LEN (mm)	0 ~ 254 mm	0 mm	Only under Windows with bundled printer driver and continuous media.

BASE SPEED (IPS)	0 ~ 6 IPS	0 IPS	For X-2000v and X-3000v only.
COUNTING	UP DOWN	DOWN	
MEDIA SENS. TYPE	REFLECTIVE SEE-THROUGH	SEE-THROUGH	Select for media characteristics. Once changed make sure to calibrate before printing.
BACK FEED	DISABLED, ENABLED	DISABLED	
BACK DISTANCE	10~40 mm	22 mm	Appears only when BACKFEED enabled.
BASE DARKNESS	0~99	0	
BAUD RATE (RS232)	600 / 1200 / 2400/ 4800 / 9600 / 19200 / 38400 / 57600 / 115200	9600	
PARITY (RS232)	NONE EVEN ODD	NONE	
LENGTH (RS232)	8 DATA BITS 7 DATA BITS	8 DATA BITS	
CLEAR FLASH	NO YES	NO	

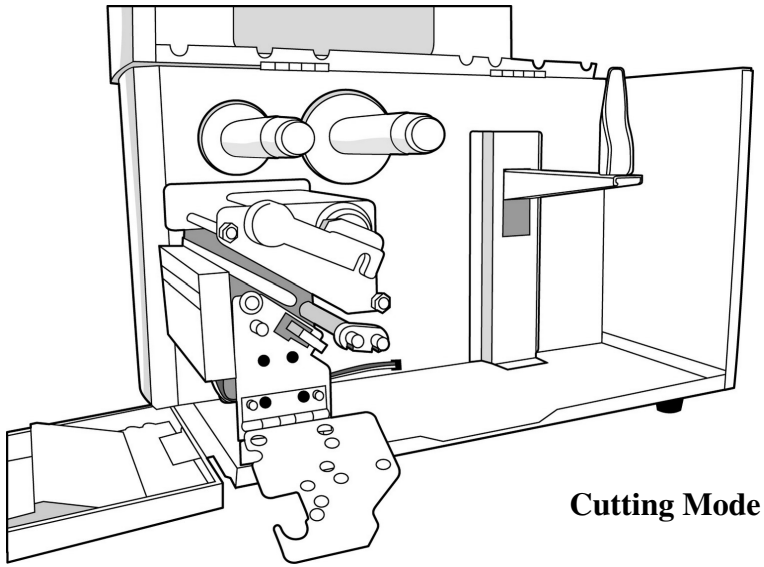
Internal Parts and Features







Peel Off Mode



Cutting Mode

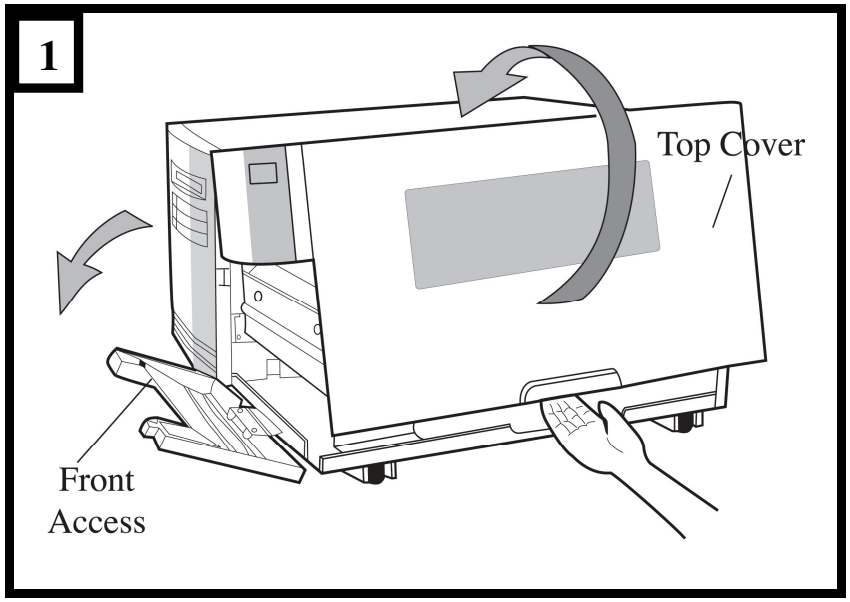
Loading Ribbon and Media

This section describes how to load ribbon and media in the X-Series printers.

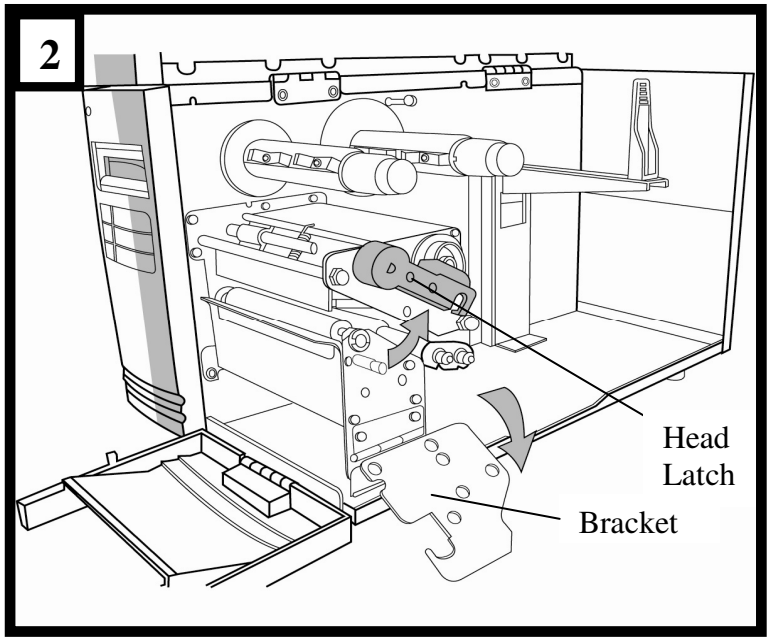
Loading a Ribbon

Note: *The X-Series uses transfer thermal printing. The ribbon is coated inside.*

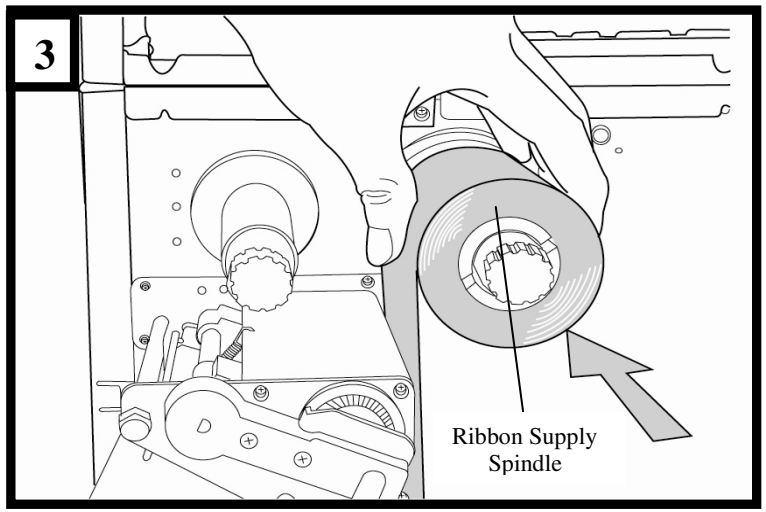
1. Lift the top cover and front access door to expose the media compartment. (Figure 1)



2. Turn the head latch counter-clockwise and open the bracket. (Figure 2)

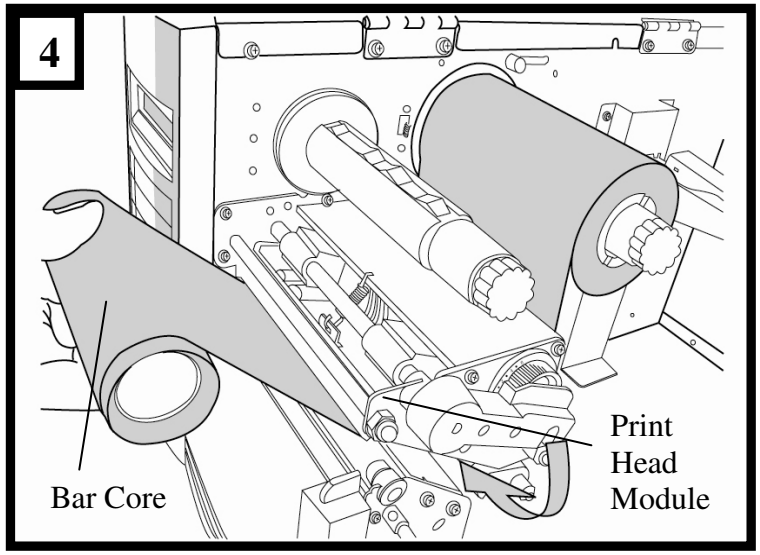


3. Unwrap the ribbon and separate the ribbon roll from the bare core. Insert the ribbon roll onto the ribbon supply spindle. (Figure 3)

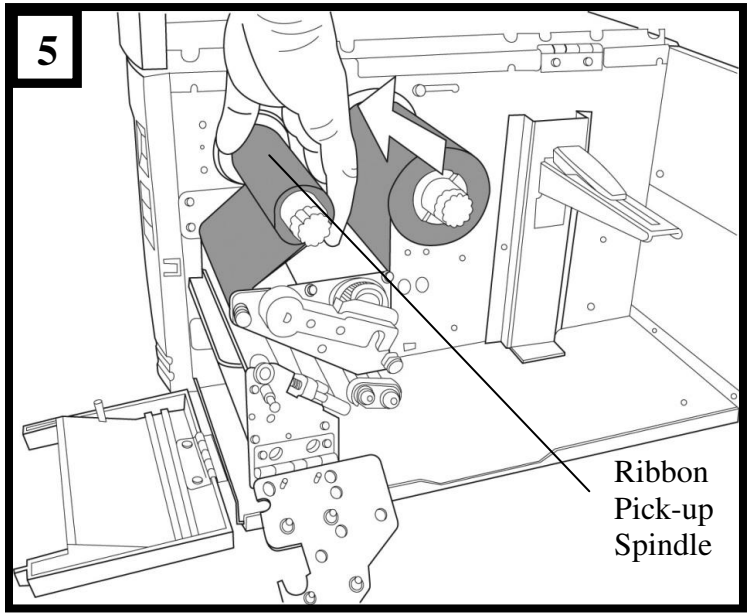


4. Lead the ribbon through the print head module. (Figure 4)

5. Attach the edge of the ribbon onto the bare core and wind it a bit onto the core. Make sure the coating side of the ribbon is face down.



6. Insert the core onto the ribbon pick-up spindle. (Figure 5)



7. Turn the pick-up spindle to ensure the ribbon is tightly wound.

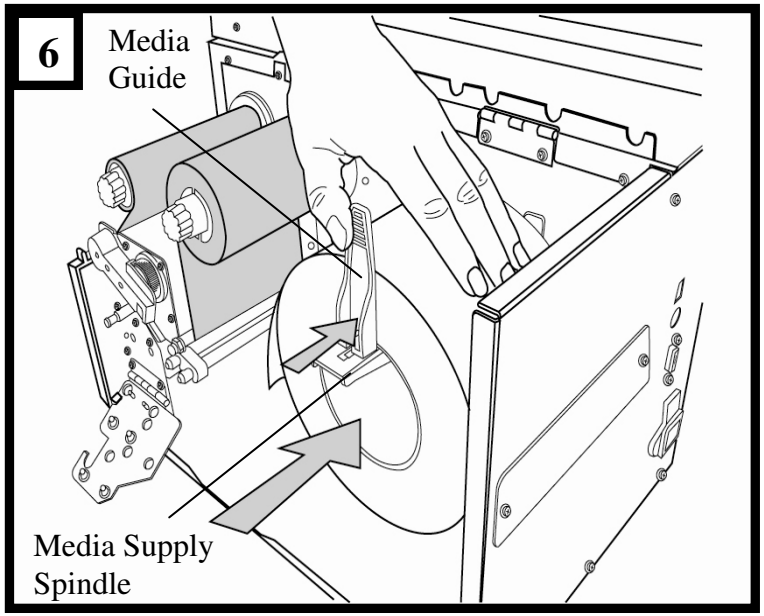
Loading Media

The X-Series printers offer three different loading modes: standard, peel-off, or with a cutter.

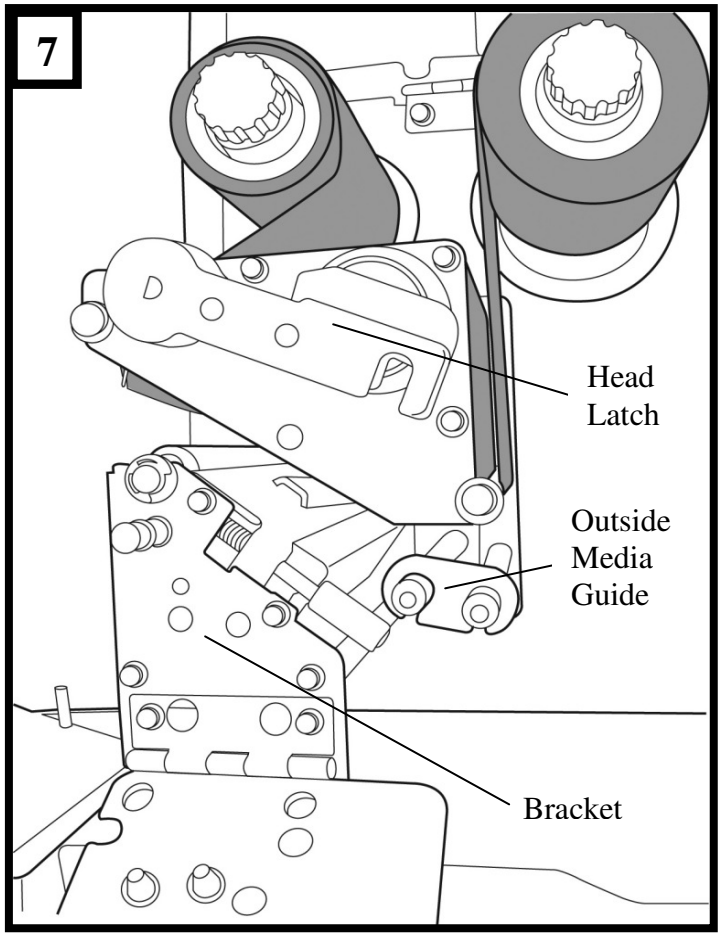
- **Standard mode** allows you to collect each label freely.
- **Peel-off mode** peels backing material away from the label as it prints. After the label is removed, the next label prints.
- **Cutting mode** automatically cuts the label after it prints.

Standard Mode

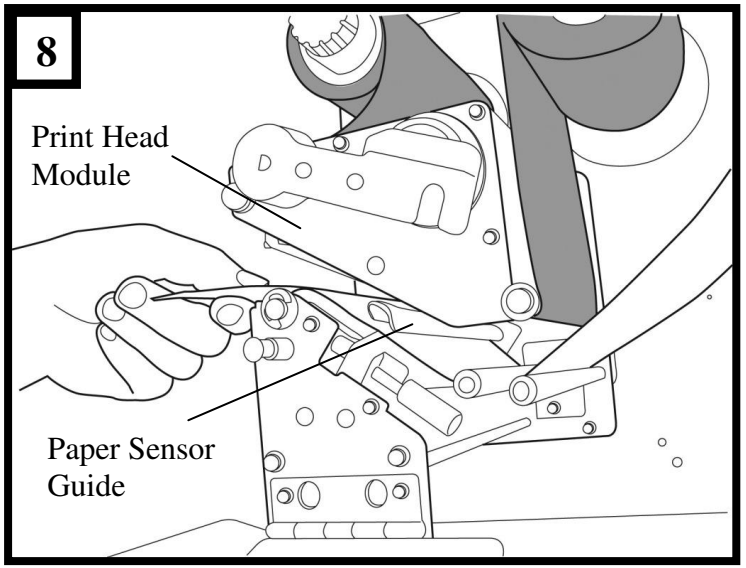
1. Insert the media roll into the media supply spindle and move the media guide to the inside. (Figure 6)



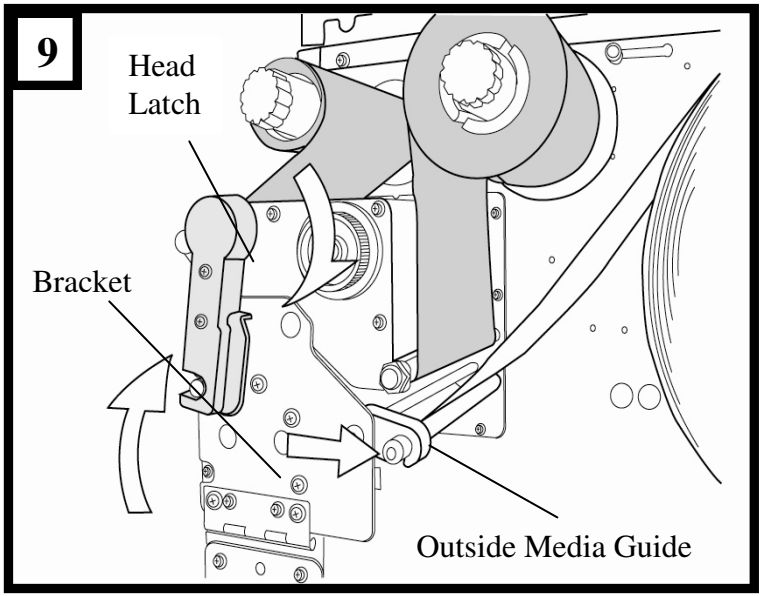
2. Turn the head latch counter-clockwise and open the bracket. Remove the outside media guide. (Figure 7)



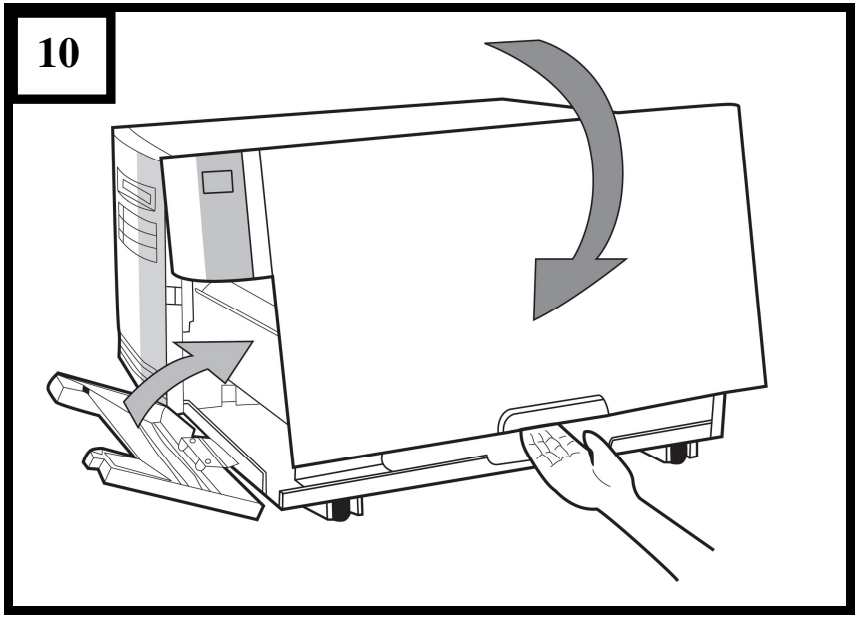
3. Lead the media through the print head module and under the paper sensor guide. (Figure 8)



4. Return the outside media guide, close the bracket, and hook the head latch. (Figure 9)



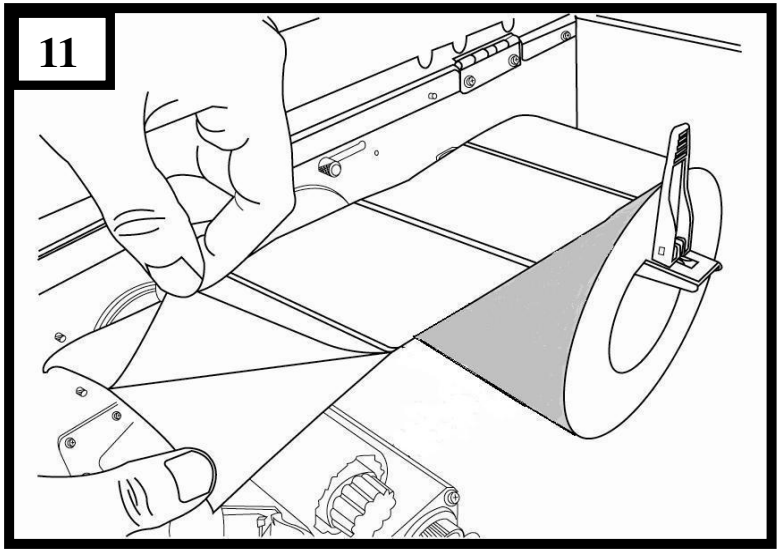
5. Close the top cover and the front access door and turn on the printer, or press the “FEED” button if the printer is already on. (Figure 10)



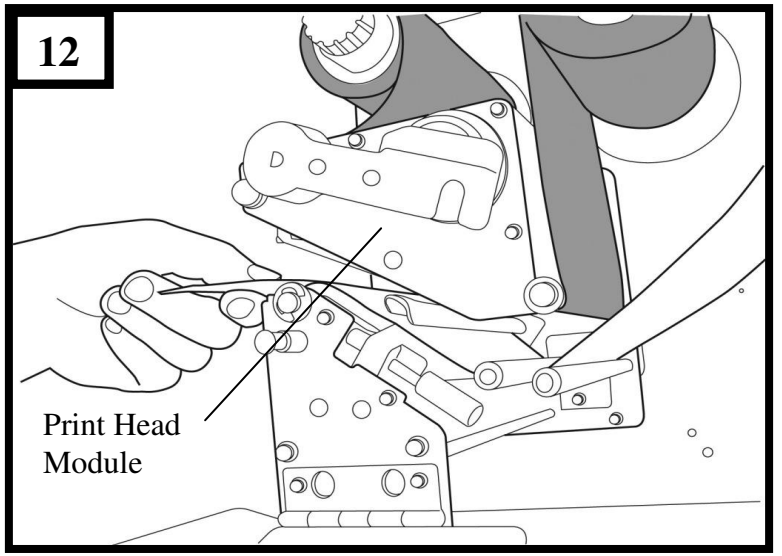
Peel Off Mode

Follow steps 1 to 3 in “Loading the Media – Standard Mode” above.

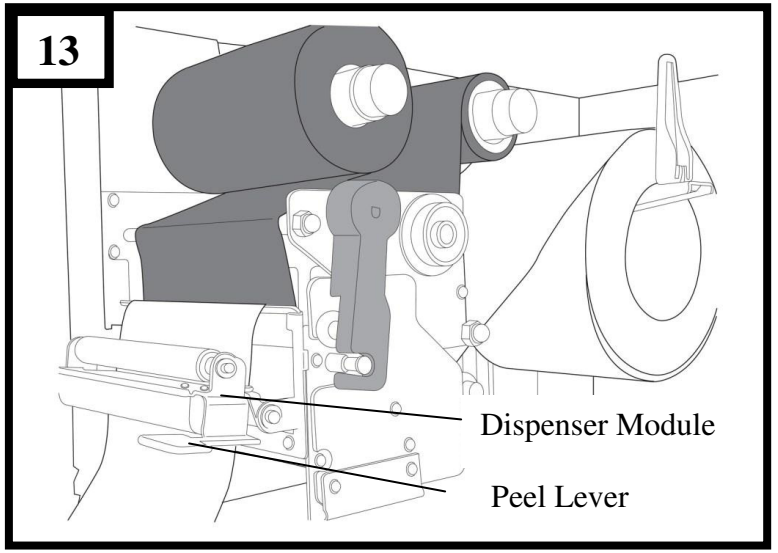
4. From the leading end of the media roll remove enough labels to expose 6-inches of backing paper. (Figure 11)



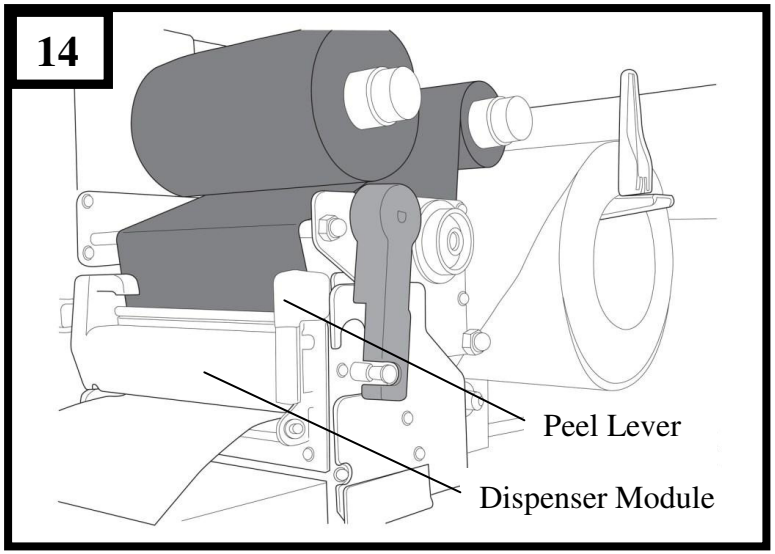
5. Lead the media backing paper through the print head module. (Figure 12)



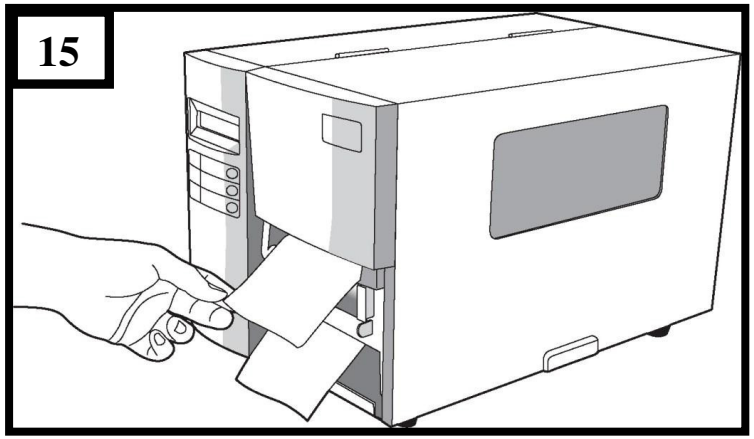
6. Push down the peel-off mechanism release lever and lead the media under the peeler module. (Figure 13)



7. Close the peeler module using the peel-off mechanism release lever. (Figure 14)



8. Close the top access door and turn on the printer or press the FEED button if the printer is already on. (Figure 15)



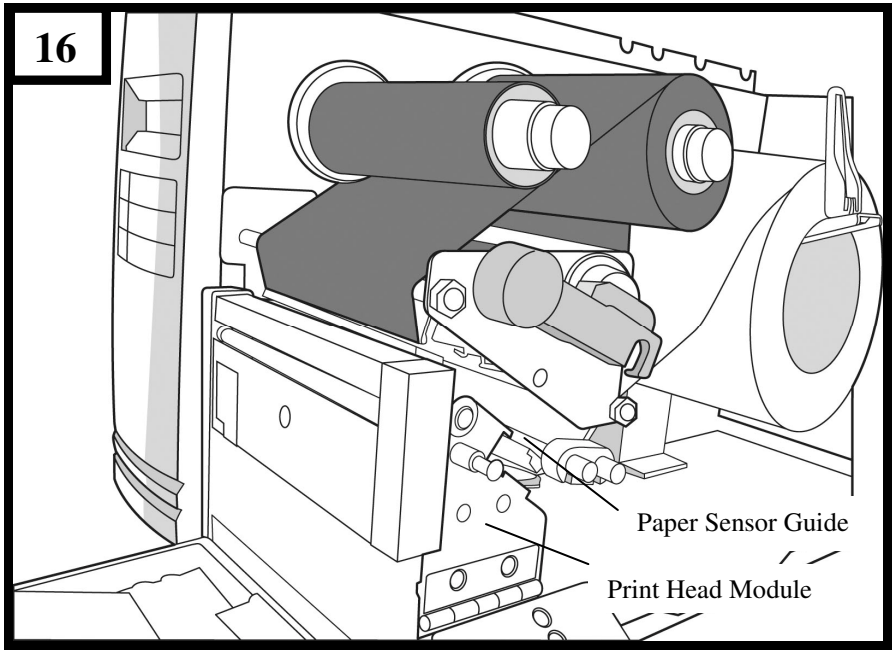
Notes:

1. *The FEED button does not make the printer peel. For peeling to occur when the panel setting is properly enabled.*
2. *Make sure the peeler sensor is out of the ribbon path when installed.*

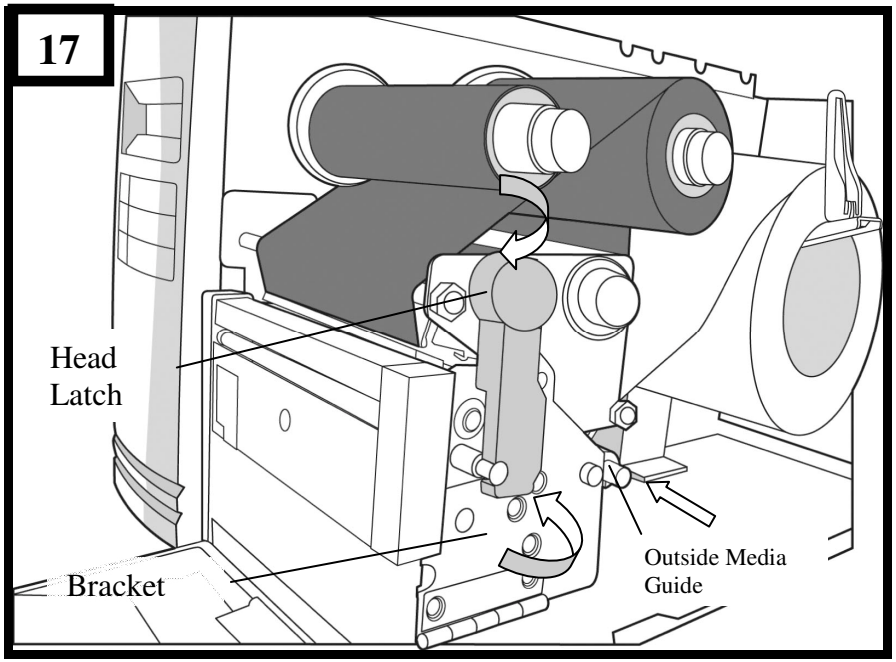
Cutting Mode

Follow steps 1 to 3 in “Loading the Media – Standard Mode” above.

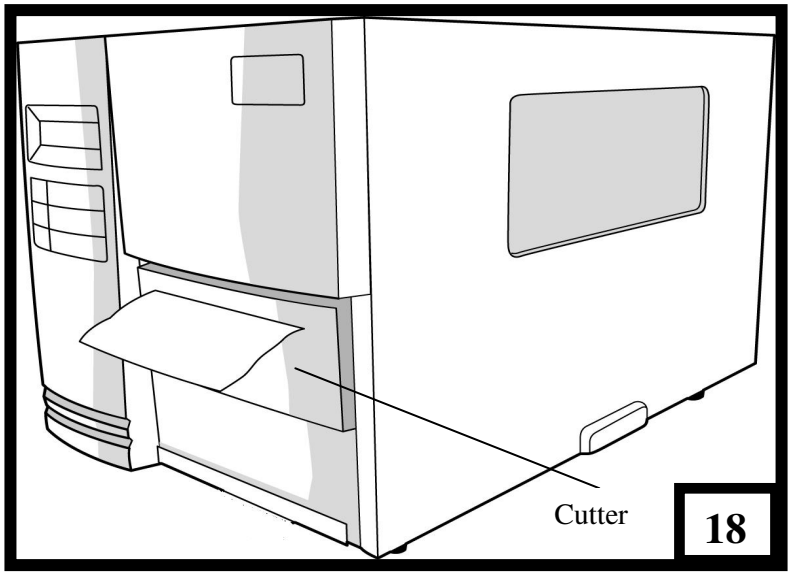
4. Insert the media into the print head module and under the paper sensor guide. (Figure 16)



5. Return the outside media guide, close the bracket, and hook the head latch. (Figure 17)



6. Close the top access door and turn on the printer or press the FEED button if the printer is already on. The printer will then feed the labels through the cutter automatically. (Figure 18)



Note: *The FEED button does not make the printer cut. For cutting to occur when the panel setting is properly enabled.*

Configuration

This section discusses calibration, printing configuration and resetting the printer to factory defaults.

Performing Calibration

After the media is loaded, recommend you performing media calibration to calibrate the label sensor.

1. Turn off the printer
2. Press and hold the PAUSE button and turn on the power.
3. When “CALIBRATION …” is displayed on the LCD (X-2000v, X-3000v), and both READY and MEDIA indicators blink, release the PAUSE button.
4. The printer feeds 12-inches of blank labels.
5. When “READY” is displayed, the READY and MEDIA indicators stop blinking but remain illuminated.

Note: *For X-1000v, the step3 will be bypassed.*

Important! *Recommend you performing media calibration after changing media. Failure to do so could result in improper detection by the label sensor.*

Printing a Configuration Report

To perform a self-test and print a configuration report:

1. Turn off the printer.
2. Press and hold the FEED button while turning on the power.
3. When “SELF-TESTING …” is displayed on the LCD (X-2000v, X-3000v) and the READY indicator blinks, release the FEED button.
4. The printer prints out a configuration report.
5. When “READY” is displayed on the LCD (X-2000v,X-3000v), the READY indicator stops blinking but remains illuminated.
6. The following information is printed in the report:
    - Font list
    - Hardware configuration and status
    - Label parameters
    - Firmware version

Notes:

1. *For X-1000v, the step3 and step5 will be bypassed.*
2. *After the self-test the printer enters the diagnosis mode (Dump mode). To continue to normal operation, press CANCEL button to cancel the diagnosis mod (Dump mode).*

Resetting to Factory Default Settings

To reset the printer to factory default settings:

1. Turn off the printer.
2. Press and hold the CANCEL button and turn on the printer.
3. When “E2PROM RESET …” is displayed on the LCD (X-2000v, X-3000v) and the READY indicator blinks, release the CANCEL button.
4. When “READY” is displayed on the LCD(X-2000v, X-3000v), the READY indicator stops blinking but remains illuminated.
5. When the two indicators relight, release the feed button.
6. The following information is printed in the report:
    - Label parameters
    - Heat (Darkness)
    - Speed
    - Symbol set (language)
    - Others for specific emulation

Notes:

1. *For X-1000v, the step3 and step4 will be bypassed.*
2. *All settings stored in FLASH memory are retained even after turning off the printer.*
3. *You must perform the calibration for label sensitivity after you reset.*
4. *Printed label count is not reset.*

Computer Connections

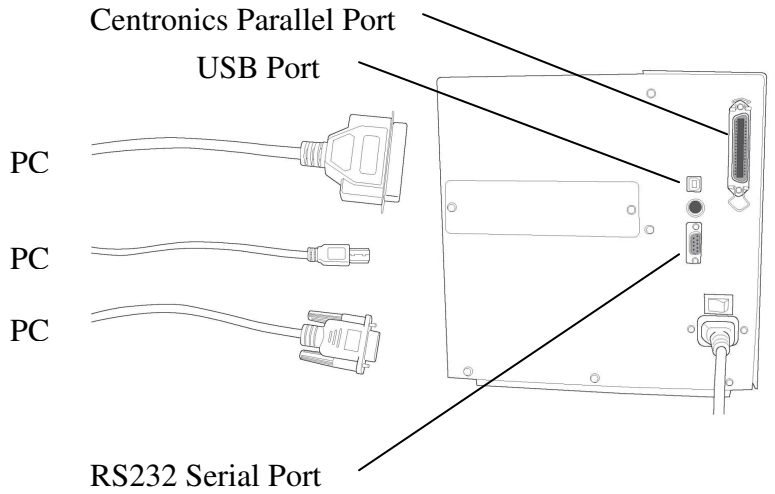
This printer comes with USB interface, a standard Centronics parallel interface, and a nine-pin Electronics Industries Association (EIA) RS-232 serial data interface.

USB Interface Requirements

The Universal Serial Bus (USB) interface is version 2.0 and 1.1 compliant and provides a full-speed (12Mb/s) interface that is compatible with your existing PC hardware. The USB's "plug and play" design makes installation easy. Multiple printers can share a single USB port/hub.

Centronics Parallel Port

You can connect the printer to the host computer's parallel port using any standard Centronics cable. The required cable must have a standard 36-pin parallel connector on one end, which is plugged into the parallel port located on the back of the printer. The other end of the parallel interface cable connects to the printer connector at the host computer. For pin-out information, please refer to the Technical Reference in this manual.



Serial (RS-232) Port

The required cable must have a nine-pin "D" type male connector on one end, which is plugged into the mating serial port located on the back of the printer. The other end of the cable connects to a serial port on the host computer. For technical and pin-out information, please refer to the Technical Reference in this manual.

Note:

1. *Centronics allows a much higher communication speed than serial.*
2. *The pin assignment of serial cable is different from PC. Please contact your local Argox reseller if you need this cable.*

Communicating with the Printer

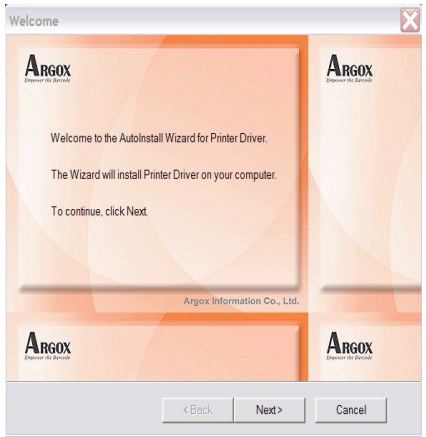
The bundled printer driver can be applied to all applications under Windows 98/2000/NT, and Windows XP. With this driver you can run any popular Windows software applications such as MS-Word and print to this printer.

Before Installation

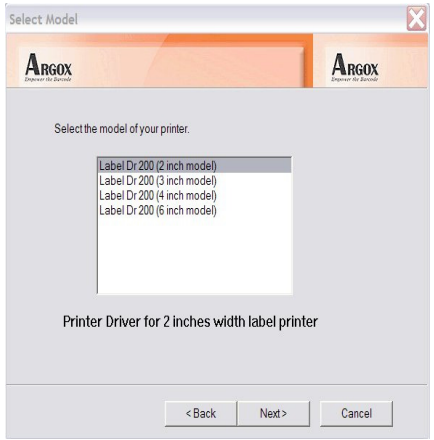
1. Check the contents of the driver to ensure it is complete.
2. Make a backup copy of the driver.

Installing the Driver (auto install driver)

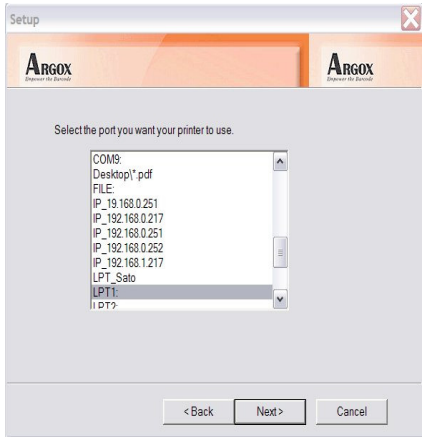
1. Double click the driver file (Label Dr. 200 or Label Dr. 300) to execute in Windows.
2. Click "Next".


Welcome
ARGOX
Welcome to the AutoInstall Wizard for Printer Driver.
The Wizard will install Printer Driver on your computer.
To continue, click Next.
Argox Information Co., Ltd.
< Back
Next >
Cancel

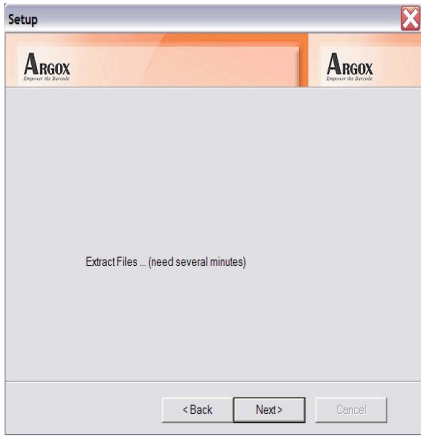
3. Select a driver for your printer and click "Next". For 203 dpi modes with 4 inches print width, you should select Label Dr.200 (4 inch model).


Select Model
ARGOX
Select the model of your printer.
Label Dr 200 (2 inch model)
Label Dr 200 (3 inch model)
Label Dr 200 (4 inch model)
Label Dr 200 (6 inch model)
Printer Driver for 2 inches width label printer
< Back
Next >
Cancel

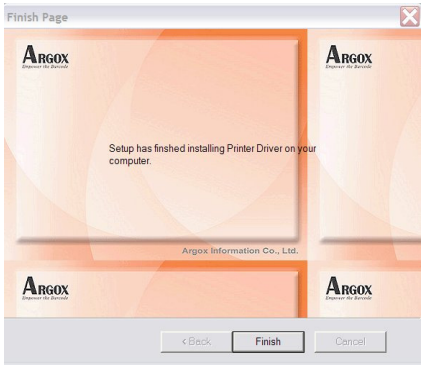
4. Select the port of the printer and click "Next".



5. After the related files have been copied to your system, click “Next”.



6. After the installation is complete, click “Finish”.



Notes:

1. *If you are updating the driver, make sure you first delete the previous version.*
2. *If you install new bar code application software such as ArgoBar, LabelView or CodeSoft, you should activate the Label Dr. 200 (or Label Dr. 300) driver and set it as the current printer driver:*
3. *If you install new bar code application software such as Bartende Ultra Lite, you should activate the seagull driver for Argox printer.*

ArgoBar

File → New→ Select Printer→ Label Dr. on LPT1: → OK

LabelView

File→ Select Printer→ Label Dr. on LPT1: → OK

CodeSoft

File→ Printer→ Windows→ Label Dr. on LPT1: → OK

LabelMatrix

File→ Printer Setup →Label Dr. on LPT1: → OK

Nicelabel

File→ Printer Setup →Label Dr. on LPT1: → OK

Bartender (Pro or Enterprise)

File→ Printer Setup →Label Dr. on LPT1: → OK

Installing the USB Driver (Plug and Play)

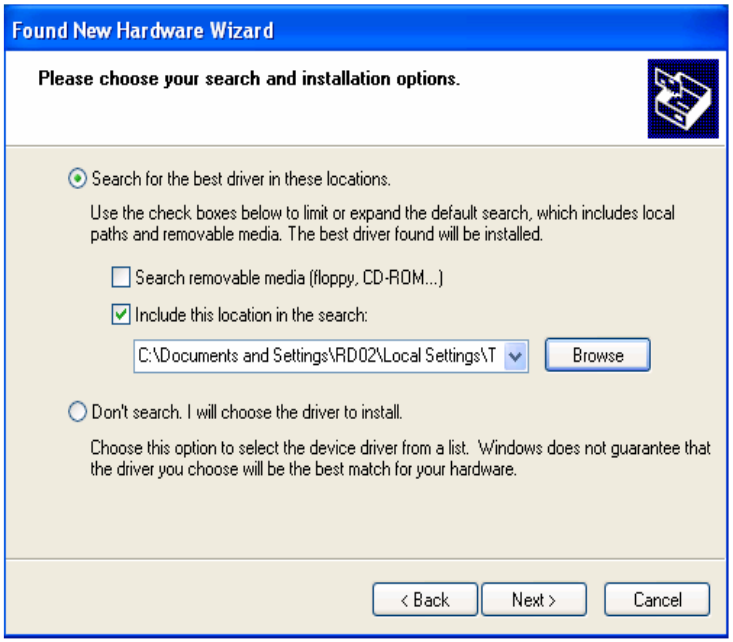
Note:

The printer driver needs to install version 1.4.00 or later and support "USB Plug and Play" for Windows XP, Windows 2003 and Windosw 2000.

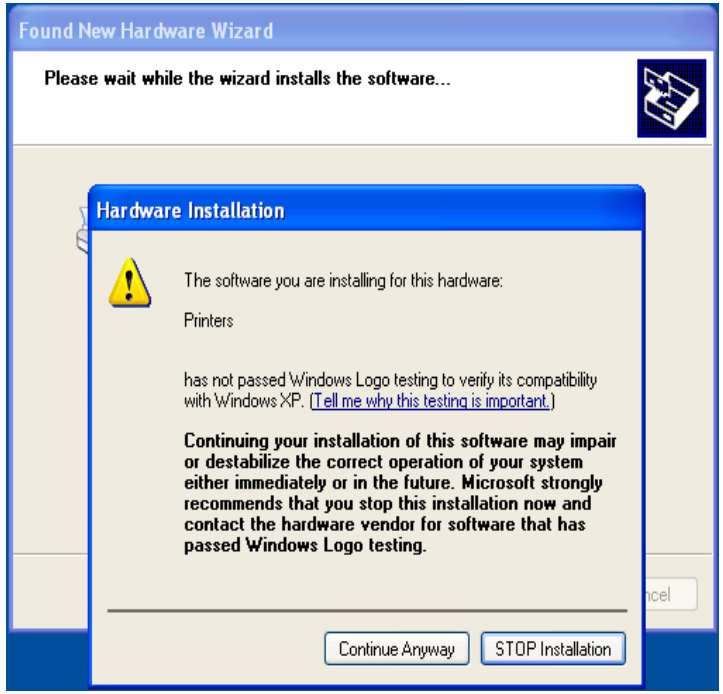
1. Extract the PrinterDriver.exe to the fixed route. ("C:\Label Dr. 200", for example)
2. Connect the label printer to a computer with a USB cable.
3. Turn on the printer's power and the system detects the device automatically.
4. Select "Install from a list or specific location (Advanced)", click "Next".

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
Label printer203dpi
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

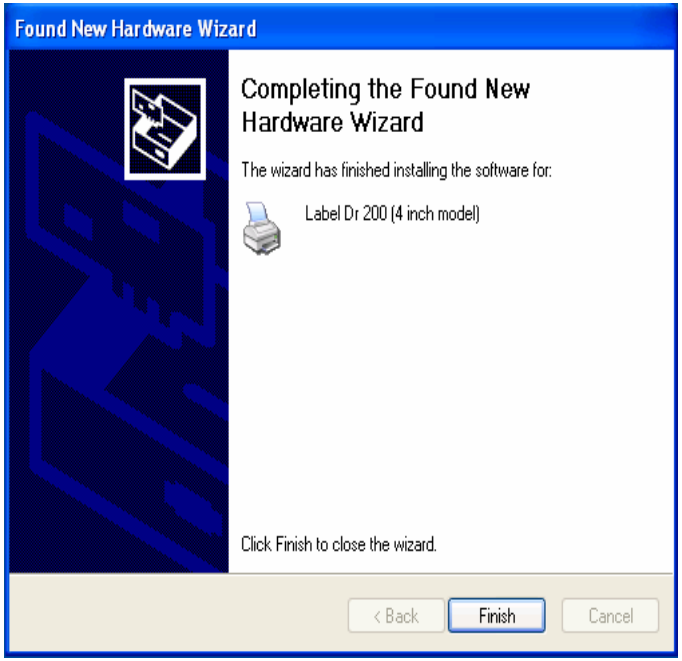
5. Select "Search for the best driver in these locations" and choose "Include this location in the search". Input the location of printer driver, click "Next".


Found New Hardware Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
C:\Documents and Settings\RD02\Local Settings\T
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

6. Select “Continue Anyway”.

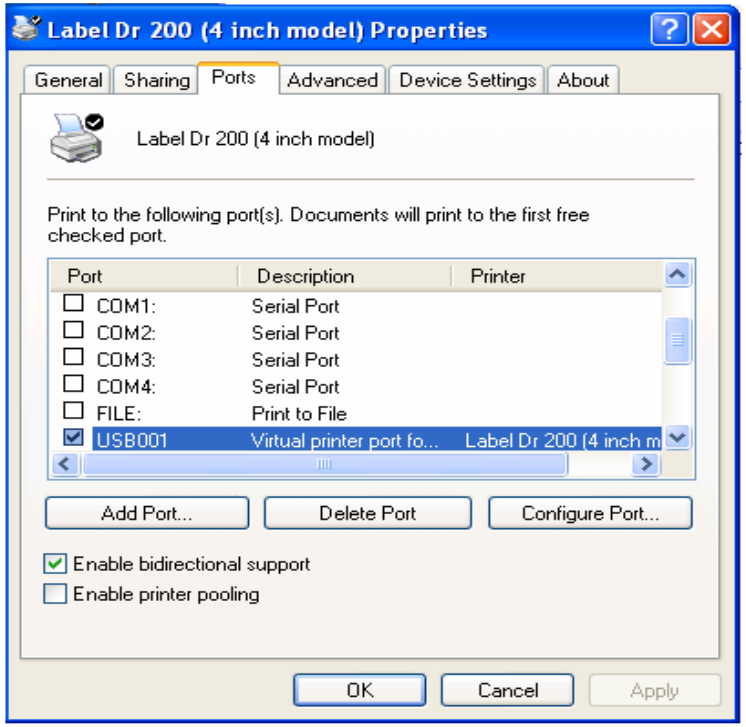

Found New Hardware Wizard
Please wait while the wizard installs the software...
Hardware Installation
The software you are installing for this hardware:
Printers
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

7. Click “Finish”.


Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Label Dr 200 (4 inch model)
Click Finish to close the wizard.
< Back
Finish
Cancel

8. The Label Dr200 (4 inch model) printer is added in “Printers and Faxes”.
9. Reboot the system.

10. The system assigns the USB port for Label Dr200 (4 inch model) printer



Setting Parameters

After installing the driver, follow the path below to set parameters:

Start → Settings→ Printers→ Label Dr.→ Properties

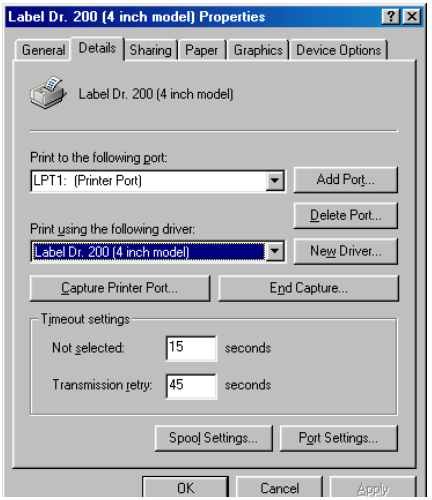
Parameters include:

Ports	Select the IO port to link with the printer. The port may be parallel (LPT), serial (COM), network port, or file.
Paper size	Select the proper size. If there is no desired size, select "Custom" to define paper size.
Create a new size	Define paper size in Win 2000/NT4.0
Orientation	Set portrait or landscape.
Paper source (Media type)	T/T stands for thermal transfer (ribbon) mode and D/T for direct thermal mode (without ribbon).
Media choice (Darkness)	Set the heat value or darkness from this field. Darkness values range from 0 to 15.
Copies	This function designates the number of printed copies of each page.
More options (Accessories)	To use the cutter or peeler function, enter More Options and select one of the items.
Device options (Speed)	Set print speed. For the X-1000+, speed ranges from 1 to 4 IPS, for X-2000+/3000+ speed ranges from 1 to 6 IPS.

Parameters for Win 98

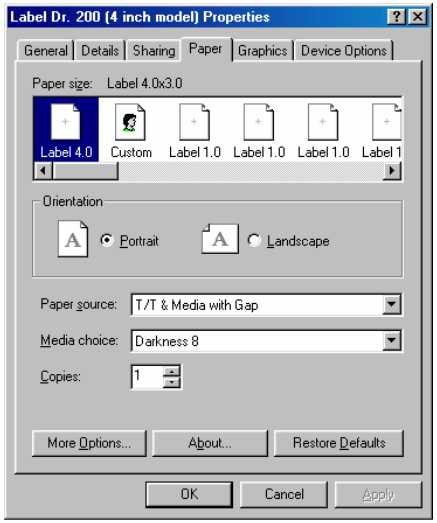
Ports

In the Properties menu:
→ Click "Details"
→ Select the IO port.
→ Click "OK"



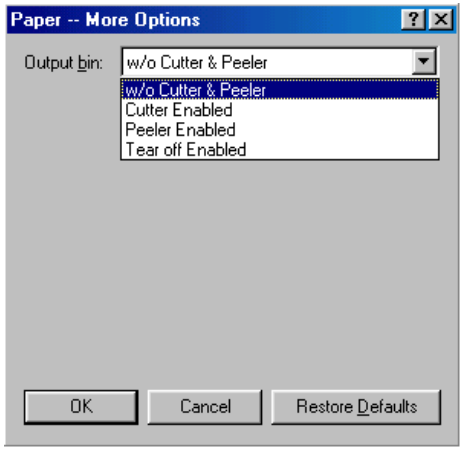
Paper size
Orientation
Paper source
(Media type)
Media choice
(Darkness)
Copies

In the Properties menu:
→Click "Paper"
→Click items to select the desired parameters
→Click "OK"



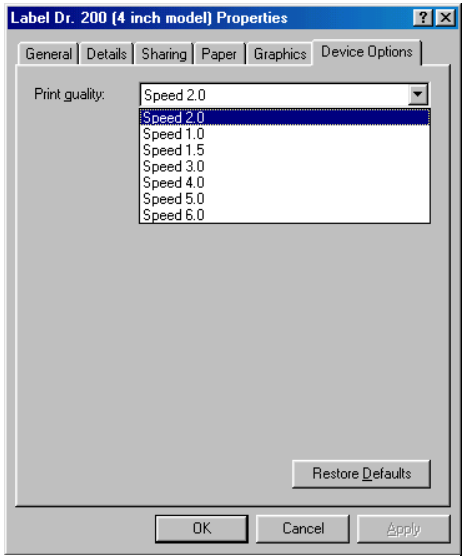
Output bin
(Accessory setting)

In the Properties menu:
→ Click "Paper"
→ Click "More Options"
→ Select Enable w/o cutter, peeler
→ Click "OK"



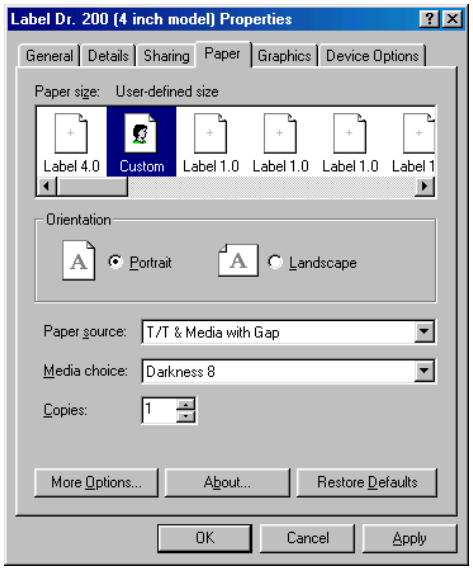
Print quality
(Speed)

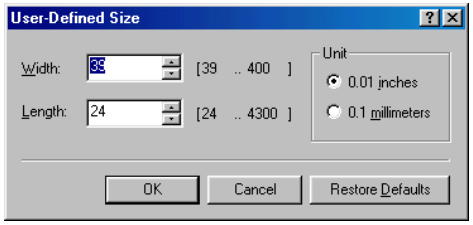
In the Properties menu:
→ Click "Device Options"
→ Select parameters
→ Click "OK"



Create a custom size

In the Properties menu:
→ Click "Paper"
→ Select "Custom"
→ User-Defined Size
→ Set a custom size
→ Click "OK"

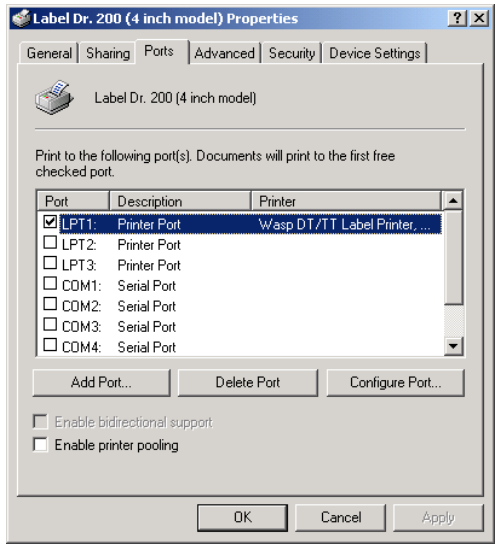




Parameters for Win 2000

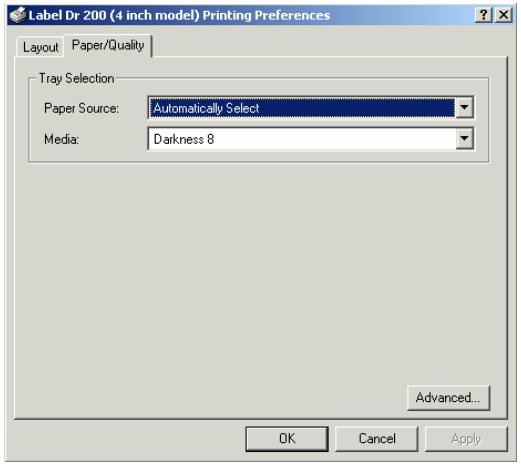
Ports

In the Properties menu:
→ Click "Ports"
→ Select the IO port
→ Click "OK"



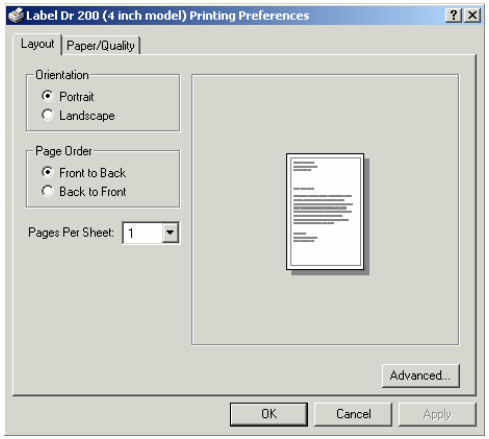
Paper source
(Media type)

In the Printers menu:
→ Right click
→ Select "Printing Preferences"
→ Click "Paper/Quality" and select media type
→ Click "OK"



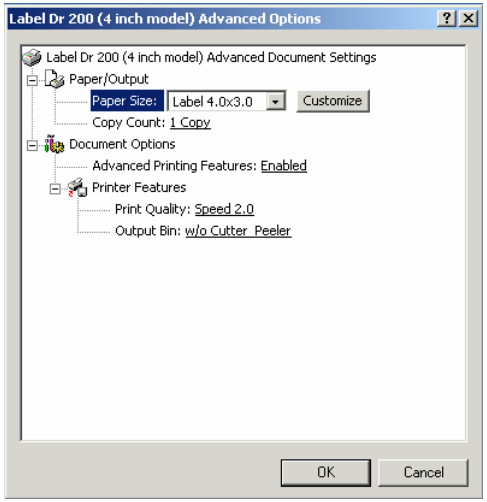
Orientation
Page order

In Printing Preferences:
→ Click "Layout"
→ Select "Portrait" or "Landscape"
→ Click "Page order""
→ Select "Front to Back" or "Back to Front"
→ Click "OK"



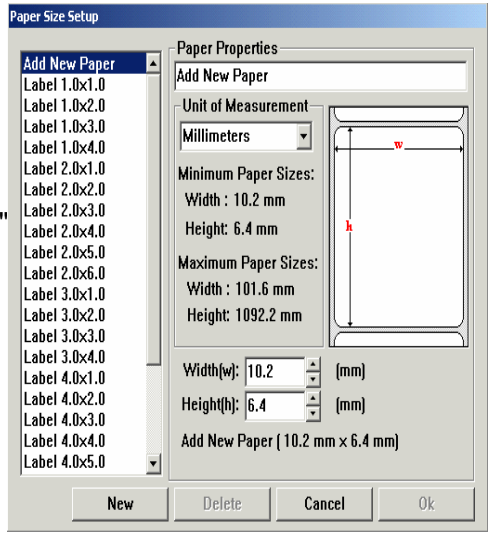
Paper size
Copies
Print quality
(Speed)
Output bin
(Accessory setting)

In Printing Preferences:
→ Click "Layout"
→ Click "Advanced"
→ Click each item to select parameters
→ Click "OK"



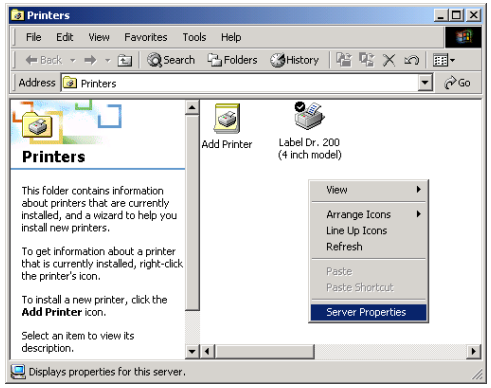
Paper size setup

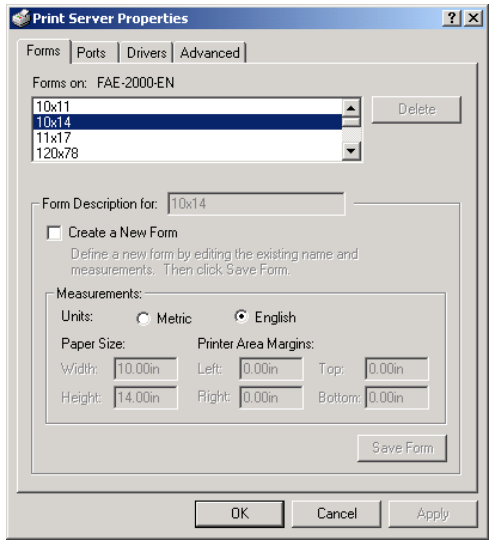
In Printing Preferences:
→ Click tag "Layout"
→ Click button "Advanced"
→ Click "button Customize""
→ Select "paper size" or add new paper size.
→ Click "OK"



Create a custom size

In the Printers menu:
→ Right click
→ Select "Server Properties"
→ Enter a form name for in "Form Description for"
→ Reset paper size in "Measurements"
→ Click "OK"

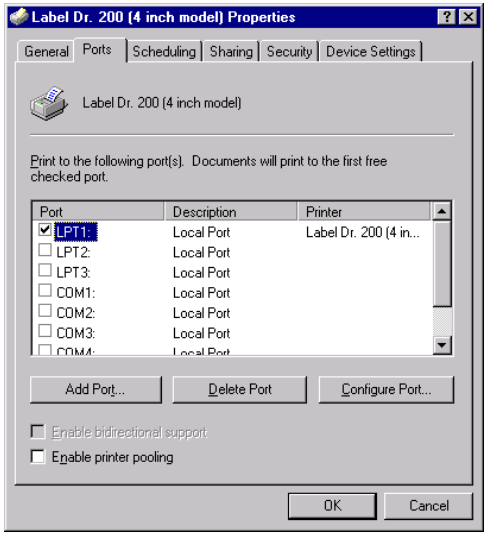

Printers
File Edit View Favorites Tools Help
Address Printers
Printers
This folder contains information about printers that are currently installed, and a wizard to help you install new printers.
To get information about a printer that is currently installed, right-click the printer's icon.
To install a new printer, click the Add Printer icon.
Select an item to view its description.
Add Printer
Label Dr. 200 (4 inch model)
View
Arrange Icons
Line Up Icons
Refresh
Paste
Paste Shortcut
Server Properties
Displays properties for this server.



For NT 4.0

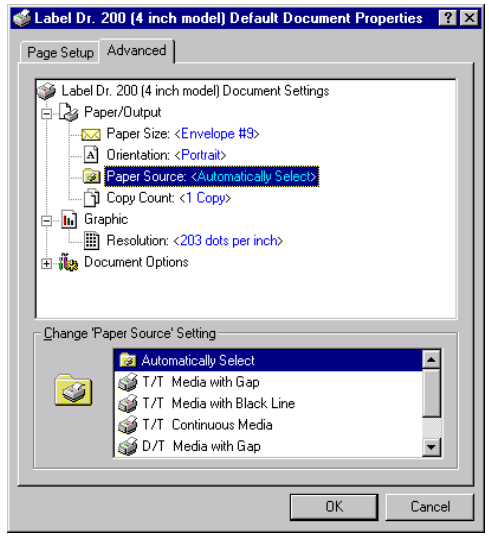
Ports

In the Properties menu:
→ Label Dr.
→ Click "Ports"
→ Select IO port
→ Click "OK"


Label Dr. 200 (4 inch model) Properties
General Ports Scheduling Sharing Security Device Settings
Label Dr. 200 (4 inch model)
Print to the following port(s). Documents will print to the first free checked port.
Port Description Printer
LPT1: Local Port Label Dr. 200 (4 in...
LPT2: Local Port
LPT3: Local Port
COM1: Local Port
COM2: Local Port
COM3: Local Port
Add Port... Delete Port Configure Port...
Enable bidirectional support
Enable printer pooling
OK Cancel

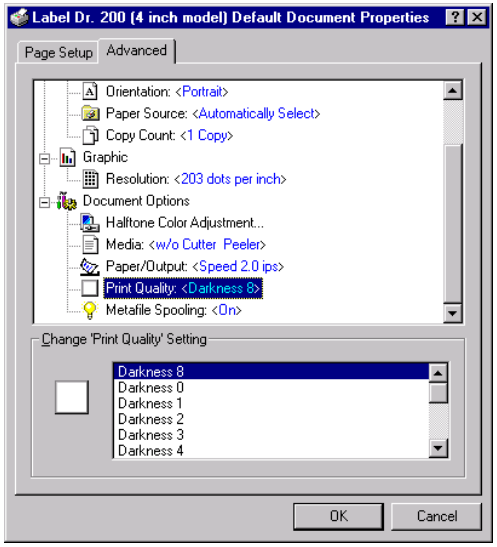
Paper size
Orientation
Paper source
(Media type)
Copies
Media choice
(Accessory setting)

In the Printer's menu:
→ Right click
→ Select "Document Defaults"
→ Click "Advanced"
→ Click items to select desired parameters



Paper/Output
(Speed)
Print quality
(Darkness)

In Default Document:
→ Click "Advanced"
→ Click item to select desired parameters
→ Click "OK"



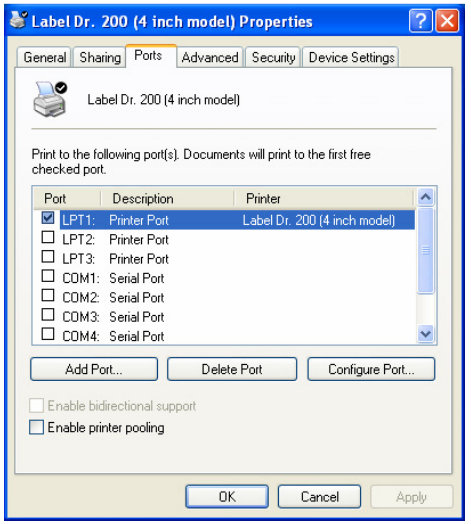
Create a custom size

Please refer to **Create a custom size** in Win 2000 above.

For Win XP

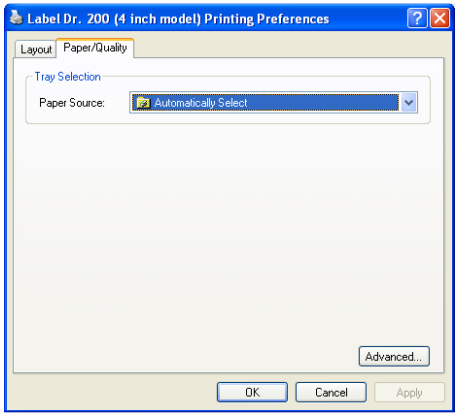
Ports

In the Properties menu:
→ Click "Ports"
→ Select the IO port
→ Click "OK"

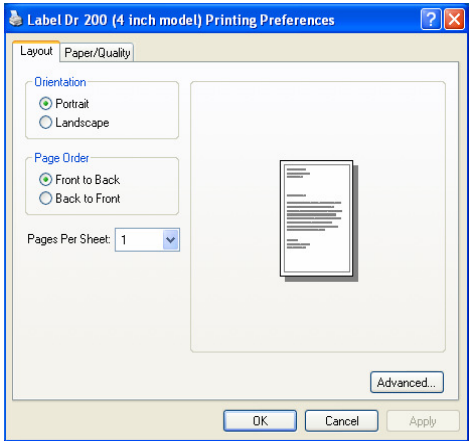


Paper source
(Media type)

In the Printers menu:
→ Label Dr
→ Right click
→ Select "Printing Preferences"
→ Click "Paper Quality"
→ Select media type
→ Click "OK"

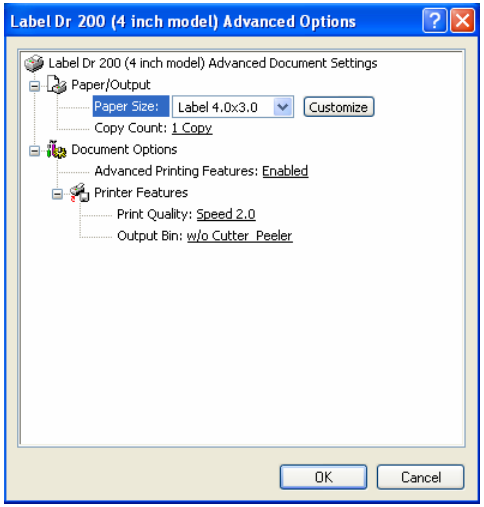


Orientation
Page order



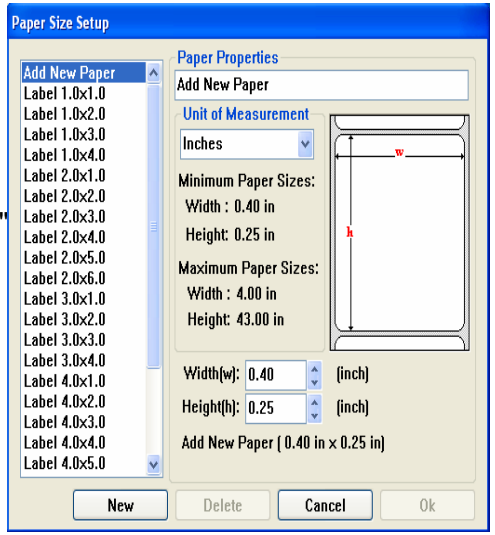
In Printing Preferences:
→ Click "Layout"
→ Select "Portrait" or "Landscape"
→ Click "Page order""
→ Select "Front to Back" or "Back to Front"
→ Click "OK"

Paper size
Copies
Print quality
(Speed)
Output bin
(Accessory setting)



In Printing Preferences:
→ Click "Layout"
→ Click "Advanced"
→ Click items to select parameters
→ Click "OK"

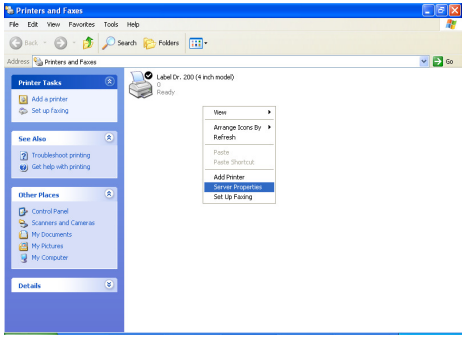
Paper size setup

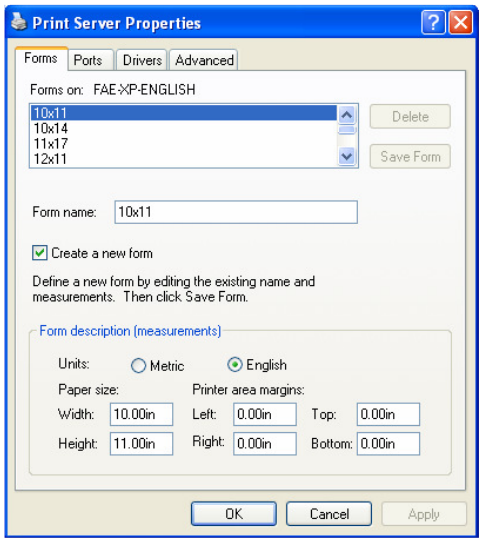


In Printing Preferences:
→ Click tag "Layout"
→ Click button "Advanced"
→ Click button "Customize""
→ Select "paper size" or Add new paper size.
→ Click "OK"

Create a custom size

In the Printers menu:
→ Right click
→ Select "Server Properties"
→ Enter a “Form name”
→ Reset paper size in the "Form description"
→ Click "OK"





Troubleshooting

Normally, if the printer is in not working properly, the "READY" LED blinks continuously, and printing and communication between the host and printer stops.

LED and LCD Diagnosis

Blinking LEDs indicate a problem. Check the LEDs and the LCD display and refer to the following solutions:

Media Problems

LED/LCD	Indication
READY and MEDIA LEDs	Blinking
LCD Display	MEDIA OUT

Possible Problems	Solutions	Remarks
Miss-detected gap	Check the media path Check the position of the label sensor	For continuous media, check application and driver, and select continuous media.
Media out	Supply the media roll	
Media not installed	Install the media roll	
Media jam	Recover the jam	

Note: *If problem continues perform a label sensor calibration.*

Ribbon Problems

LED/LCD	Indication
READY and RIBBON LEDs	Blinking
LCD Display	RIBBON OUT

Possible Problems	Solutions	Remarks
Ribbon out	Supply the ribbon roll	Not applicable to direct thermal.
Ribbon jam	Recover the jam	
Ribbon sensor error	Replace ribbon sensor	

Note: *If you use direct thermal, set with panel, Windows driver or command.*

Other Problems

LED	Indication
READY LED	Blinking

Problems	Solutions	Remarks
Serial IO error	Check the baud rate, format or protocol between host and printer	Not for Centronics

Cutter failed	• Check the media. • Check the connection between cutter and main board. • Call for service.	
Memory full	Check graphics and soft fonts from host. If no longer used by application software then delete.	Need to reboot the system.

Note: *After problem is solved, press CANCEL to continue printing.*

Miscellaneous

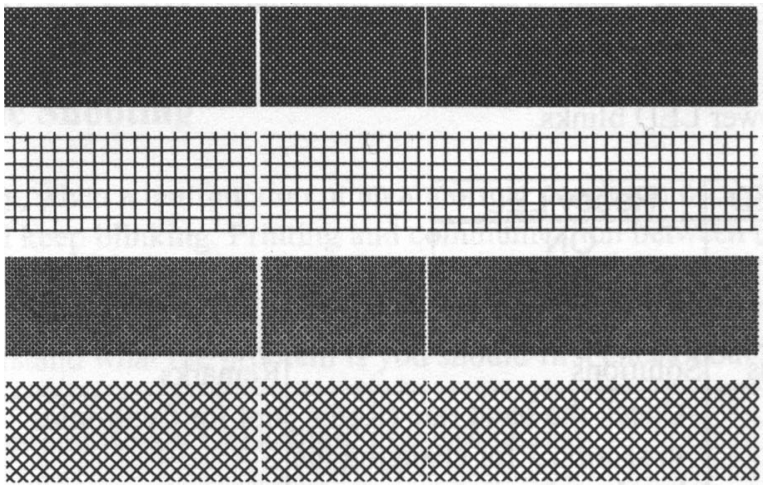
If the host shows "Printer Time out"

1. Check if the communication cable (parallel or serial) is connected securely to your parallel or serial port on the PC and to the connector on the printer at the other end.
2. Check if the printer power is turned on.

If the power cord is connected, the power switch is at position "I" and the power LED is still not illuminated, check the fuse inside the power adapter case.

If the data has been sent, but there is no output from the printer. Check the active printer driver, and see if Label Dr. for your Windows system and the label printer has been selected.

Vertical streaks in the printout usually indicate a dirty or faulty print head. (Refer to the following examples.) Clean the print head. If the problem persists, replace the print head.



For unstable ribbon roll rotation, check the label path and make sure the head latch is securely closed.

Poor printout quality:

- The ribbon may not be qualified.
- The media may not be qualified.
- Adjust the Darkness (heat temperature).
- Slow down the print speed.
- Refer to the following and clean the related spare parts.

Recovery

After correcting problems, simply press the CANCEL button or restart the printer. Make sure the LEDs are not blinking and remember to resend your files.

Caring for Your Printer

Clean the following components of the printer using a cotton bud dampened with alcohol. Do not soak the cotton bud excessively.

Note: *Always switch off the power before cleaning.*

Cleaning the Print Head

Clean the print head as follows

1. Turn off the printer.
2. Open the top cover to access the print head module
3. Remove the ribbon.
4. Rub the print head with a cotton bud moistened with alcohol.
5. Check for any traces of black coloring or adhesive on the cotton after cleaning.
6. Repeat if necessary until the cotton is clean after it is passed over the head.

Note: *Clean the print head every time the ribbon is replaced or more often depending on actual usage and conditions.*

Cleaning the Roller

Using a cotton bud moistened with alcohol, clean the roll and remove any attached glue.

Note: *Clean the roller after it has been in contact with foreign materials such as dust or adhesives.*

Cleaning the Media Compartment

Clean the media compartment with a cotton bud that has been moistened with a mild detergent. Every time a media roll is printed, you should clean this compartment to reduce the incidence dust.

Technical Reference

General Specifications

Specification	X-1000v	X-2000v	X-3000v
Printing method	Direct thermal and thermal transfer		
Printing resolution	203 DPI (8 dots/mm)	203 DPI (8 dots/mm)	300 DPI (12 dots/mm)
Printing width	1.0”~4.09” (25~104mm)	1.0”~4.09” (25~104mm)	1.0”~4.25” (25~108mm)
Printing length	0.5” ~ 50” (13~1270mm)		
Printing speed	2 ~ 4 ips (51~104mm/s)	2 ~ 6 ips (51~152 mm/s)	
Memory	8MB DRAM 4MB Flash ROM		
CPU type	32 bit RISC CPU		
Media sensor	Reflective & Transmissive		
Display	LED x 3	LCD display 2-line x 16 LED x 3	
Communication interface	Centronics parallel RS-232 serial USB	Centronics parallel RS-232 serial PS/2 keyboard USB	
Maximum label roll diameter	8 in. (203 mm) outside diameter 1.5 in.~3.0 in. (38mm~76 mm) inside diameter		

Media type	Roll-feed, die-cut, continuous, fan-fold, tags, ticket in thermal paper or plain paper.		
Ribbon	Wax, Wax/Resin, Resin; Coating inside and outside		
Ribbon size	OD 3 in. (76mm) ID 1 in. (25 mm)		
Compact size	W9.8” x H10.2” x L16” (W250 x H260 x L410 mm)		
Weight	30.6. lbs (13.9kg)	25.6 lbs (11.6kg)	
Power source	110/220 VAC ± 10%, 50/60 Hz, internal transformer	110/220 VAC ± 10%, 50/60 Hz, internal universal power supply	
Agency listing	CE, UL, CUL, FCC class A, CCC		
Operating temperature	40ºF ~ 104ºF (4ºC~40ºC) ; 10~90% non-condensing		
Storage temperature	-4ºF ~ 122ºF (-20ºC~50ºC)		
Windows driver	For Win 98, 2000, NT, and XP		
Printer emulation	PPLA or PPLB	PPLA , PPLB or PPLZ	PPLB
Optional Accessories	Serial (RS232) cable, Cutter, Dispenser, Combo add-on card (4MB font card, RTC module as optional add-on), Standalone KDU – ArgoKee		

Fonts, Bar Codes and Graphics Specification

The specifications of fonts, bar codes and graphics depends on the printer emulation. The emulation is a printer programming language through which the host can communicate with your printer. There are three printer programming languages, PPLA, PPLB and PPLZ.

Printer Programming Language A, PPLA

Specification	X-1000v / X-2000v
General fonts	7 alpha-numeric fonts, OCR A and OCR B
ASD Smooth fonts	4, 6, 8, 10, 12, 14, and 18 points
Symbol sets (Code pages)	USASCII, UK, German, French, Italian, Spanish, Swedish and Danish/Norwegian
Courier fonts	8 symbol sets (PC, PC-A, PC-B, EAMA-94, Roman, Legal, Greek and Russian)
Soft fonts	Downloadable PCL fonts
Font expandability	1x1 to 24x24
Bar code types	Code 39, Code 93, Code 128/ subset A,B,C, Codabar, Interleave 2 of 5, UPC A/E/2 and 5 add-on, EAN-8/13, UCC/EAN-128, Postnet, Plessey, HBIC, Telepen, and FIM. MaxiCode PDF417 and DataMatrix (2D symbologies)
Graphics	PCX, BMP, IMG, and HEX formats
Stand-alone operation no host	ArgoKee

Printer Programming Language B, PPLB

Specification	X-1000v	X-2000v /X-3000v
General fonts	5 fonts with different point sizes	
Symbol sets (Code pages)	8 bits: code page 437, 850, 852, 860, 863, and 865 7 bits: USA, British, German, French, Danish, Italian, Spanish, Swedish and Swiss.	
Soft fonts	Downloadable soft fonts	
Font expandability	1x1 to 24x24	
Bar code types	Code 39(checksum), Code 93, Code 128/ subset A,B,C, Codabar, Interleave 2 of 5(checksum), Matrix 25, UPC A/E 2 and 5 add-on, EAN-8/13, Code 128UCC, UCC/EAN, Postnet, German Postcode. MaxiCode and PDF417 (2D symbologies)	Code 39(checksum), Code 93, Codabar, Interleave 2 of 5(checksum), Matrix 25, UPC A/E 2 and 5 add-on, EAN-8/13, Code 128UCC, UCC/EAN, Postnet, German Postcode. MaxiCode and PDF417 (2D symbologies)
Graphics	PCX and binary raster	
Stand-alone operation no host	X-1000v: connect with ArgoKee X-2000v/ X-3000v: connect with PC keyboard/ ArgoKee, or barcode reader (PS/2 interface)	

Notes:

1. *Since the fontboard and flash modules use the same connector, they cannot function at the same time.*
2. *All three models connect to the ArgoKee through the RS-232 serial port.*
3. *Only the X-2000v and X-3000v connect to a PC keyboard through a PS/2 port.*

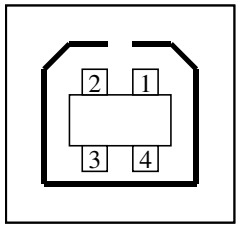
Printer Programming Language Z, PPLZ

Specification	X-2000v
General fonts	10 resident fonts (9 bitmapped fonts and 1 scalable fonts)
International character sets	14 international character sets: USA, USA2, UK, Holland, Den / Nor, Swe / Fin, German, France1, France2, Italy, Spain, Misc., Japan, page 850.
Soft fonts	Downloadable soft fonts
Bitmapped Font expandability	1x1 to 24x24
Bar code types	**One-Dimension barcode:** Code 11, Interleaved 2 or 5 (standard, industrial) , Code 39, Code 128 (A, B&C), Codabar, Logmars, MSI, UPC/EAN extension EAN-8, EAN-13, UPC-A, UPC-E and PostNet **Two-Dimension barcode:** PDF-417, MaxiCode, Data Matrix (ECC200 only), QR Code
Graphics	HEX and binary graphics with normal as well as compressed image

Interface Specifications

This section presents the interface specifications of IO ports for the printer. These include pin assignments, protocols and detailed information about how to properly interface your printer with your host or terminal.

USB



USB series “B” Receptacle Interface

Pin	Signal Name
1	VBUS
2	D -
3	D+
4	GND

Connector Terminal Pin Assignment

Serial Interface

The RS-232 connector on the printer side is a female, DB-9.

Pin	Direction	Definition
1	In	DSR
2	In	RxData
3	Out	TxData
5	-	Ground
6	Out	DTR
7	Out	RTS
8	In	CTS
9	Out	+5V

Note: *Pin 9 is reserved for a KDU (keyboard device unit). Do not connect this pin if you use a general host such as a PC.*

Connection with Host:

Host 25S (PC or compatible)	**Printer 9P**	**Host 9S** (PC or compatible)	**Printer 9P**
DTR 20	1 DSR	DTR 4	1 DSR
DSR 6	6 DTR	DSR 6	6 DTR
TX 2	2 RX	TX 3	2 RX
RX 3	3 TX	RX 2	3 TX
CTS 5	7 RTS	CTS 8	7 RTS
RTS 4	8 CTR	RTS 7	8 CTS
GND 7	5 GND	GND 5	5 GND

Alternatively you can connect the 3 wires as follows:

Host 25S (PC or compatible)	**Printer 9P**	**Host 9S** (PC or compatible)	**Printer 9P**
TX 2	2 RX	TX 3	2 RX
RX 3	3 TX	RX 2	3 TX
GND 7	5 GND	GND 5	5 GND
pin 4		pin 4	
pin 5		pin 6	
pin 6		pin 7	
pin 20		pin 8	

The simplest way to connect to other hosts (not PC compatible) or terminals is:

Printer		Terminal/Host
Pin 2- RxData	.....	TxData
Pin 3- TxData	.....	RxData
Pin 5- Ground	.....	Ground

In general, as long as the data quantity is not too large and you use Xon/Xoff as flow control, it will be problem free.

Baud rate: 2400, 4800, 9600, 19200 and 38400.

Data format: always 8 data bits, 1 start bit and 1 stop bit.

Parity: always non parity

Handshaking: XON/XOFF as well as CTS/RTS (hardware flow control).

If you run an application with the bundled printer driver under Windows and use the serial port, you should check the above parameters and set the flow control to "Xon/Xoff "or "hardware".

Parallel (Centronics)

The parallel port is a standard 36-pin Centronics connector. Pin assignments are as follows:

Pin	Direction	Definition	Pin	Direction	Definition
1	In	/STROBE	**13**	Out	SELECT
2	In	Data1	**14,15**		NC
3	In	Data 2	**16**	-	Ground
4	In	Data3	**17**	-	Ground
5	In	Data4	**18**		
6	In	Data5	**19~30**	-	Ground
7	In	Data6	**31**		NC
8	In	Data7	**32**	Out	/Fault
9	In	Data8	**33~36**	-	NC
10	Out	/ACK			
11t	Out	BUSY			
12	Out	PE			

Auto Polling

Both the serial port and parallel port of this printer can be active at the same time, i.e. the printer can simultaneously communicate with two PCs via different ports. However as no port contention is made for this printer, if both PCs transmit data at the same time the data may become damaged in the receiving buffer.

ASCII TABLE

NUL			0	@	P	'	P
SOH	XON	!	1	A	Q	a	q
STX		"	2	B	R	b	r
	XOFF	#	3	C	S	c	s
		$	4	D	T	d	t
	NAK	%	5	E	U	e	u
ACK		&	6	F	V	f	v
BEL		'	7	G	W	g	w
BS		(	8	H	X	h	x
		)	9	I	Y	i	y
LF		*	:	J	Z	j	z
	ESC	+	;	K	[	k	{
FF		,	<	L	\	l	I
CR		-	=	M	]	m	}
SO	RS	.	>	N	^	n	~
SI	US	/	?	O	_	o	DEL

Appendix A: Printer Status

LCD display	Blinking LED	Description
PAUSE	READY	Printer is paused. Press PAUSE or CANCEL to return to normal.
MEDIA OUT	MEDIA READY	Media is uninstalled or used up. Load new media to the printer.
RIBBON OUT	RIBBON READY	Ribbon is uninstalled or end-of-ribbon occurred. Load new ribbon to the printer.
SERIAL IO ERROR	READY	Format or baud rate of RS232 communication is inconsistent between printer and host.
CUTTER FAILED	READY	Cutter cannot cut off the media, check media and cutter.
MEMORY FULL	READY	Printer buffer full due to loaded soft fonts, graphics or forms. Check data format. Call for service.
HEAD OPEN	READY	Print head latch is not closed. To print label the head latch must be closed.
P. SENSOR O.R.	READY	Media sensor is out of range during calibration. Make sure the media is installed and the label sensor is under the media.
TPH TOO HOT	MEDIA	Printing job will start until the temperature of TPH goes down.

Appendix B: Stand-alone Keyboard and Barcode Reader

This appendix covers stand-alone operation with keyboard or barcode reader.

Keyboard

To use the printer in stand-alone operation with a keyboard follow the procedure described below (X-2000v and X-3000v).

1. Make a form for the keyboard. (The form should include “ZS” command to store to flash memory. Refer to the following command sample.)
2. Turn on the printer; download the form from PC to printer.
3. Turn off the printer.
4. Connect the keyboard to the keyboard interface.
5. Turn on the printer.
6. Check LCD for instructions of each data string/ label count/ copies; type to input data accordingly.

Form Control Functions

Key	Function
Esc	Enter or exit from keyboard mode
Backspace	Delete the last typed character
F1	Next form if more than one form exists
Enter	- Select the form - End of typed data

Example: Making a Keyboard Form

1. Make a command file for the form, KBD.FRM.

Command	Description
ZS	Enable store to flash
FK"KBDFORM"	Delete previous one
FS"KBDFORM"	Start of form
V00,15,N,"Product Name ?"	Variable and display message
C0,10,N,+1,"Product No. ?"	Counter and display message
Q50,24	Label dimension
q816	Label width
S2	Speed
D8	Darkness
ZT	Print from top
A550,20,0,4,1,1,R,"ABC COMPANY"	Fixed data
B550,60,0,2,2,4,40,B,C0	Barcode I25 for counter
A540,150,0,3,1,1,N,V00	Print the input product
FE	End of form
ZN	Disable store to flash

2. Send the file, KBD.FRM to printer under MS-DOS
   >COPY/B KBD.FRM LPT1:

3. Turn off the printer, connect the keyboard and then turn on the printer. The LCD displays this message:

READY (203,PPLB)
<ESC> FOR KEYBD

4. Press <ESC> to enter the keyboard mode and the form name appears. Press <ENTER> to select the form.

KBDFORM
↵

5. Key-in the product name and number.

Product Name ?
Barcode Printer↵

Product No. ?
0123456789↵

6. Input the label count and copy count.

LABEL SET NO. ?
2↵

COPIES PER LAB ?
3↵

7. Press <ENTER> to continue to the next label and repeat steps 5 ~ 7, or <ESC> to exit.

ENTER to go on,
Or ESC to return

Output

Barcode Reader

To use the printer in stand-alone operation with a barcode reader (scanner), follow the procedure described below (X-2000v and X-3000v models).

1. Make a form for barcode reader. (Note that the form name must be “READER” The form should include “ZS” command to store to flash memory.)
2. Turn on the printer; download the form from PC to printer.
3. Set the parameter of “READER INSTALLED” on the LCD to ON position.

4. Turn off the printer.
5. Connect the barcode reader to the keyboard interface.
6. Turn on the printer.
7. Check LCD for instructions of each data string and scan barcodes to input data accordingly.

Example: Making a Barcode Reader Form

1. Make a command file for a form, READER.FRM.

Command	Description
ZS	Enable store to flash
FK"READER"	Delete previous one
FS"READER"	Start of form
V00,15,N,"Product Name ?"	Variable and display message
C0,10,N,+1,"Product No. ?"	Counter and display message
Q50,24	Label dimension
q816	Label width
S2	Speed
D8	Darkness
ZT	Print from top
A550,20,0,4,1,1,R,"ABC COMPANY"	Fixed data
B550,60,0,2,2,4,40,B,C0	Barcode I25 for counter
A540,150,0,3,1,1,N,V00	Print the input product

PA1	Single copy
FE	End of form
ZN	Disable store to flash

2. Send the file READER.FRM to printer under MS-DOS
   >COPY/B READER.FRM LPT1:

3. Turn off the printer, connect the barcode reader, set on the LCD to ON position and turn on the printer.

4. The form READER is automatically executed. Scan product name and number from printed bar codes using the barcode reader.

Product No.?
11223344↵

Product Name?
APPLE↵

5. A label is printed. The copy count depends on the PA command for the READER form. Step 4 is automatically repeated.

Output

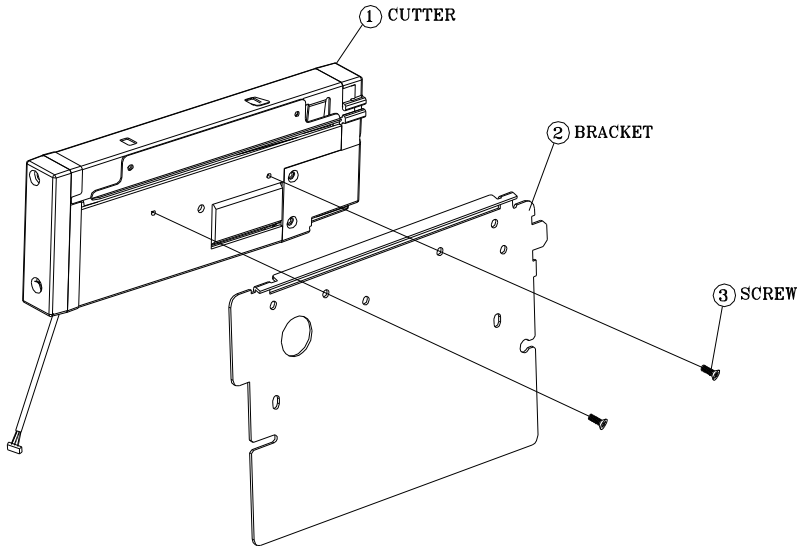
Notes:

1. *To return to normal operation, press and hold the CANCEL button and turn on the printer again.*
2. *When using a keyboard or barcode reader communicating with a host through the Centronics or serial port is prohibited.*
3. *For the keyboard form the P command is not allowed, while for the barcode reader/scanner form a PA command must be included.*

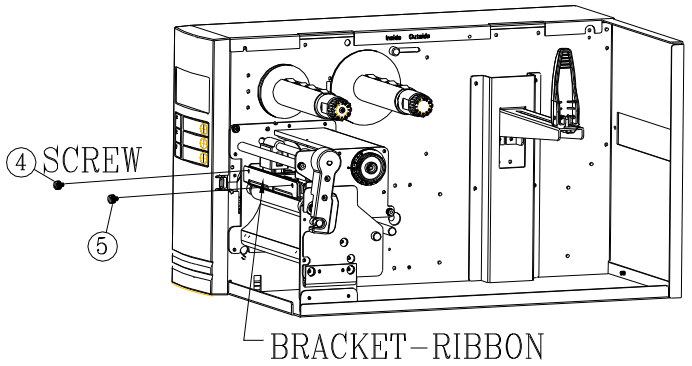
Appendix C: Cutter Installation

Install a cutter into the printer as follows:

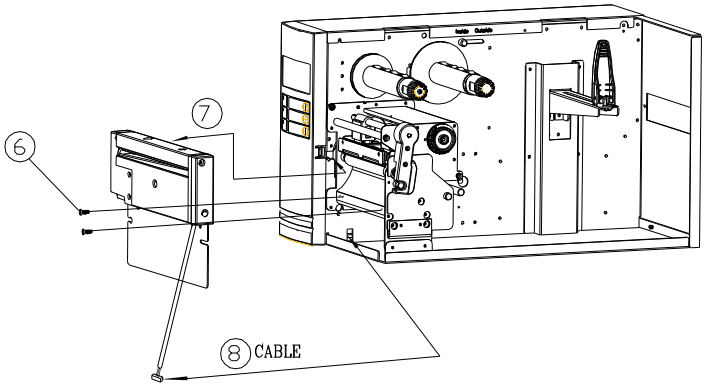
1. Turn off the printer.
2. Remove the top covers on both left and right sides.
3. Mount the cutter baby board to the U17 socket on printer's main board.
4. Secure the two screws for the cutter (1) and bracket (2).



5. Loosen and remove the two screws (4) from bracket (5).



6. Insert the left side of cutter bracket (7) and secure the two screws (6) to the TPH module.



7. Thread the cutter cable through hole (8) and route it to the JP16 connector (CUTTER) on the main board.
8. Turn on the printer.
9. For the X-2000v/X-3000v models set the parameter of “CUTTER INSTALLED” on the LCD to the ON position. For the X-1000v model bypass this step.

After the cutter is installed, install media and ribbon.

1. Put the media end on the roller.
2. Close the TPH latch.
3. Hold the PAUSE button and turn on the printer.
4. Release the button when the cutter starts cutting.
5. After cutting, the printer will feed the label for 8 inches.

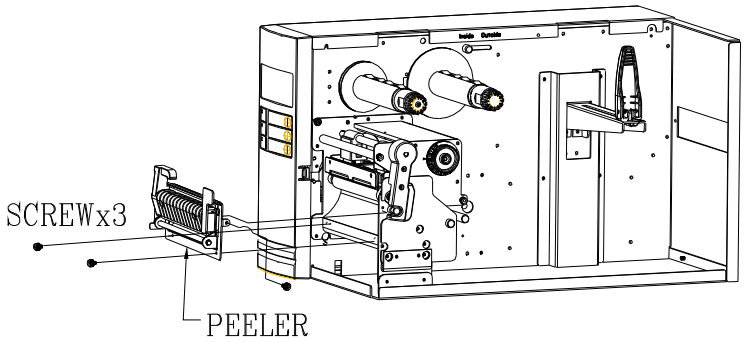
Note: *The procedure above is for first time installation or after cutter jam. Normally the procedure for loading the media through the cutter is:*

1. *Put the media end on the roller.*
2. *Close the TPH latch.*
3. *Turn on the printer.*
4. *Press the FEED button to feed the media end through the cutter.*

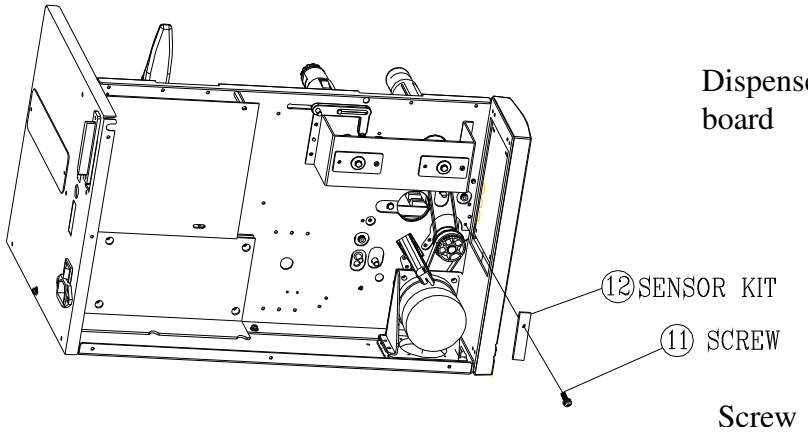
Appendix D: Dispenser Installation

Install a dispenser into the printer as follows:

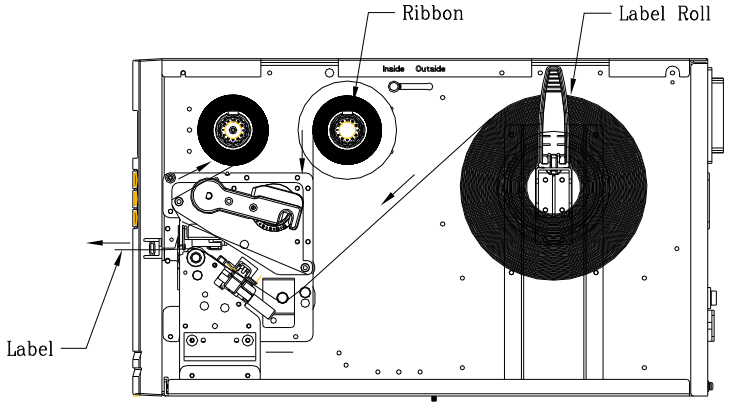
1. Turn off the printer.
2. Remove the top cover on the right side.
3. Insert the left side of dispenser bracket and secure the three screws to the TPH module.



4. Connect the dispenser sensor to JP15 (PEELER) on the printer's main board and secure the dispenser board in the case.



5. Install the ribbon and media.



6. Turn on the printer.
7. For the X-2000v/X-3000v models set the parameter of "DISPENSER INSTALLED" on the LCD to the ON position. For the X-1000v bypass this step.

Calibrating the Dispenser Sensor

If you find the sensor is not sensitive enough or is having problems detecting, you can use the following two commands to calibrate it.

Command	ASCII	Binary	Remark
Set sensor without label	<ESC>$R0	1BH 24H 52H 30H	Command 0
Set sensor with label	<ESC>$R1	1BH 24H 52H 31H	Command 1

Calibration Steps

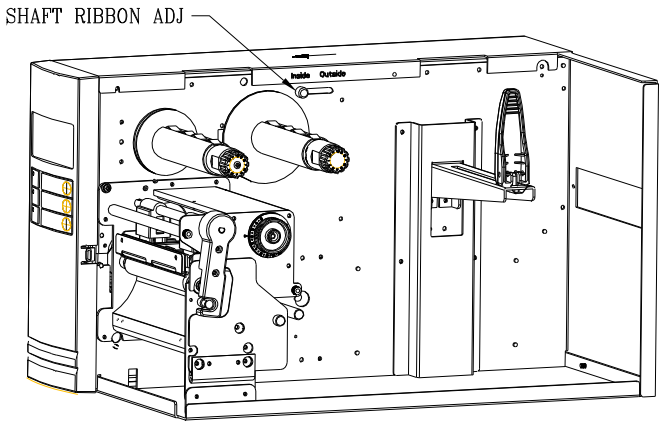
Step 1 Move the label away from the sensor, send command 0 and wait for 2 seconds.

Step 2 Move a label under the sensor (10 mm below), hold it, send command 1 and wait for 2 more seconds.

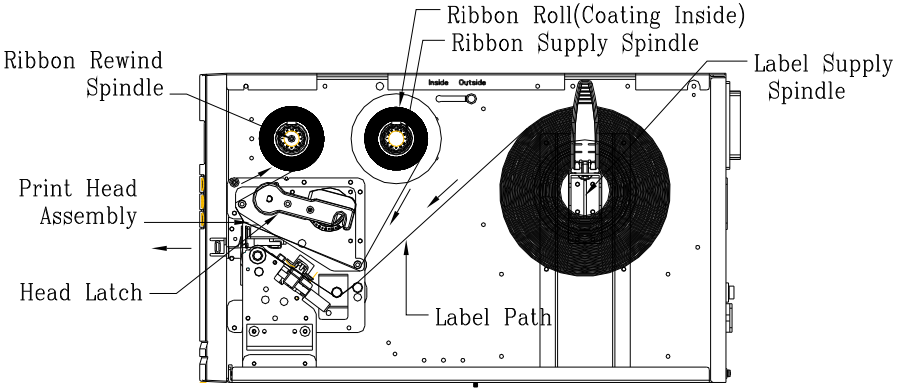
Modification for the outside and inside coating of ribbon

The printer is produced to use the ribbon with inside coating. It is also possible to use the outside coating ribbon. The modification is as follows:

1. Pull and move the SHAFT RIBBON ADJ into the Inside



2. After the adjustment, the ribbon with inside coating can be used and then install the ribbon.



3. Pull and move the SHAFT RIBBON ADJ into the Outside. The ribbon with outside coating can be used and then install the ribbon.